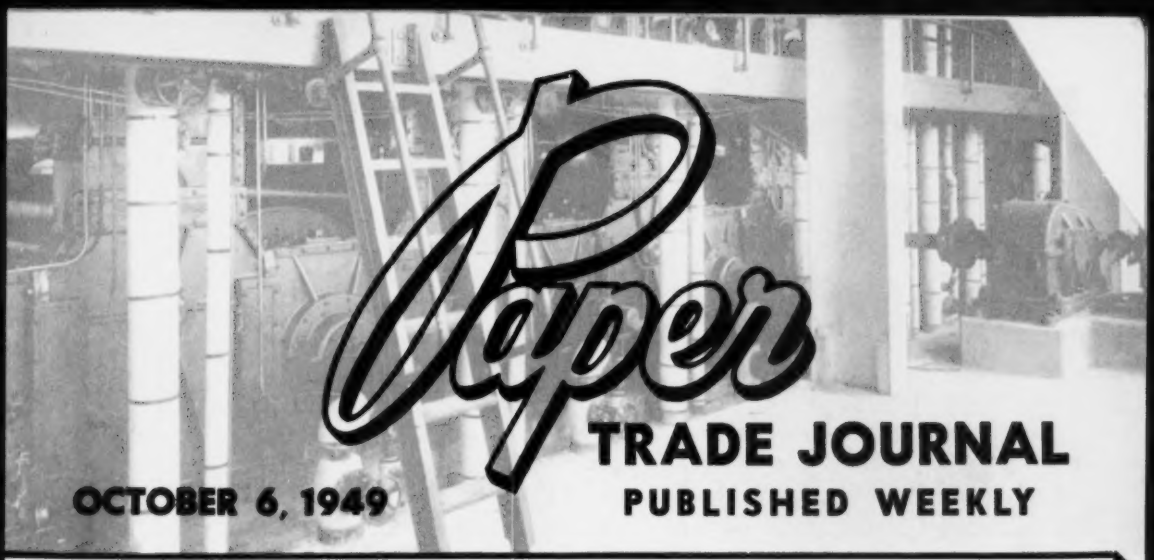

Paper TRADE JOURNAL

OCTOBER 6, 1949

PUBLISHED WEEKLY

WOOD PULP

G

Established 1886

"Thinking well is wise; planning well is wiser."

PERSIAN PROVERB

In the completion of your 1949 plans we recommend consideration of your next year's woodpulp needs.

We would like to work with you on an overall quality and economy program covering your 1950 requirements in Bleached and Unbleached Softwood and Hardwood Sulphites, Sulphates and Groundwood.

GOTTESMAN & COMPANY

— INCORPORATED —

22 EAST 40th STREET • NEW YORK 16, N. Y.

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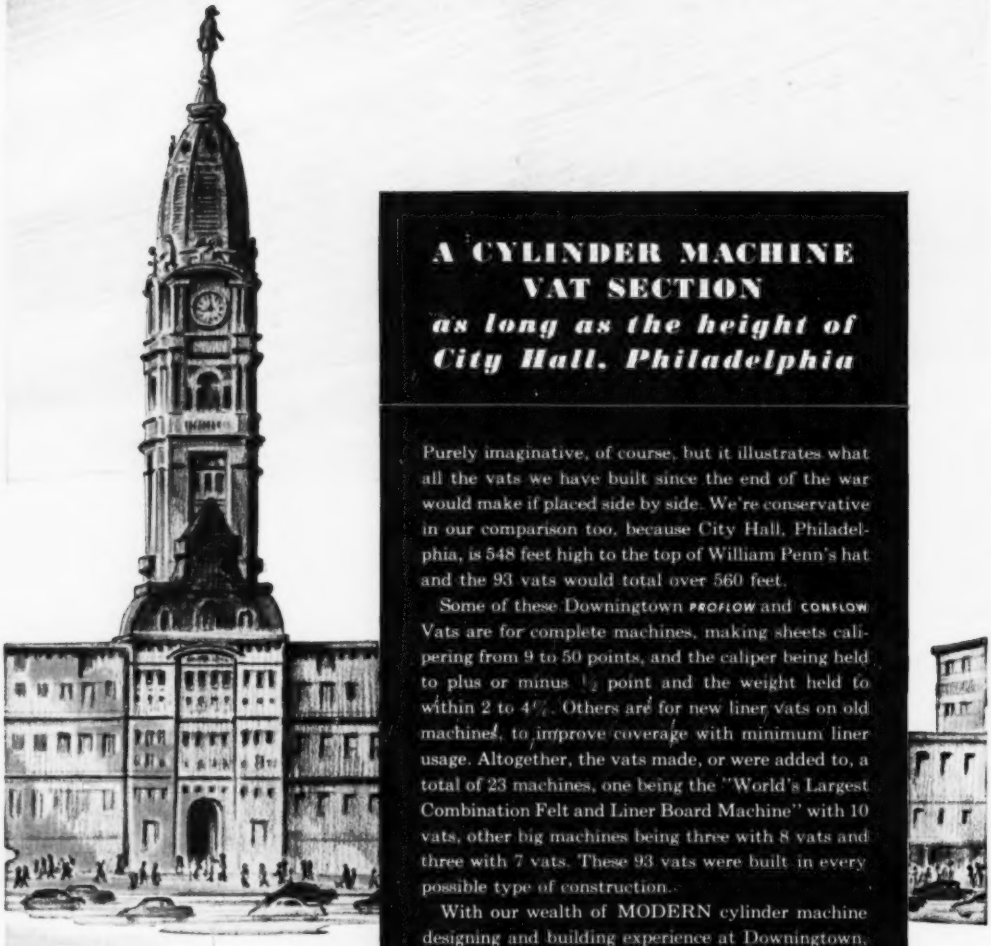


A CYLINDER MACHINE VAT SECTION

as long as the height of City Hall, Philadelphia

Purely imaginative, of course, but it illustrates what all the vats we have built since the end of the war would make if placed side by side. We're conservative in our comparison too, because City Hall, Philadelphia, is 548 feet high to the top of William Penn's hat and the 93 vats would total over 560 feet.

Some of these Downingtown PROFLOW and CONFLOW Vats are for complete machines, making sheets calipering from 9 to 50 points, and the caliper being held to plus or minus ½ point and the weight held to within 2 to 4%. Others are for new liner vats on old machines, to improve coverage with minimum liner usage. Altogether, the vats made, or were added to, a total of 23 machines, one being the "World's Largest Combination Felt and Liner Board Machine" with 10 vats, other big machines being three with 8 vats and three with 7 vats. These 93 vats were built in every possible type of construction.

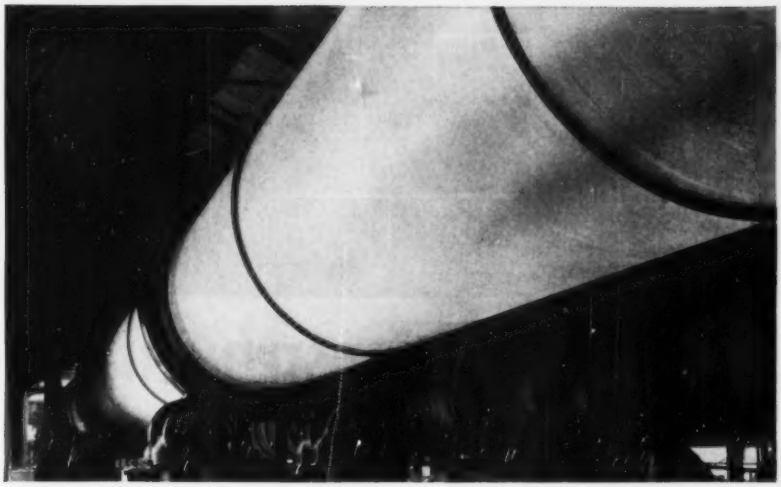
With our wealth of MODERN cylinder machine designing and building experience at Downingtown, a talk with one of our engineers may convince you that "*you cannot afford to do without the equipment you think you cannot afford to buy right now.*" Your problems of quality and production can be discussed and the solution recommended. Call on us.

DOWNINGTOWN MANUFACTURING COMPANY

DOWNINGTOWN, PA.

DESIGNERS AND BUILDERS OF PAPER MAKING MACHINERY SINCE 1880

10% More Capacity 30% Less Fuel!



. . . REPORT FROM SULPHATE MILL ON ALLIS-CHALMERS KILN

- **Heat recuperation chain system saves fuel.**
- **Kiln design provides product uniformity.**
- **One manufacturer responsibility for kiln, centralized controls and air seals.**

THIS ASTOUNDING SAVING in fuel consumption and increased kiln capacity was obtained by a large Southern sulphate mill with the installation of an 11 x 250 ft Allis-Chalmers rotary kiln with chain system. What's more . . . mill officials have ordered a 9 x 150 ft chain system equipped lime sludge kiln to complement the operation!

You can get similar results in your pyro-processing with Allis-Chalmers kilns. Design features include: ▸ floating type riding rings; ▸ forged steel rollers; ▸ kiln feeders; ▸ heat recuperating chain system. An analysis of torsional vibration is made in design of each kiln.

Allis-Chalmers also supplies feeders, slakers, and master control panel equipment. Allis-Chalmers motors and Texrope V-belt drives meet toughest requirements of rotary kiln operation.

For more details, see your nearby Allis-Chalmers Sales Office or write direct for Bulletin 07B6368.

ALLIS-CHALMERS, 994A SO. 70 ST.
MILWAUKEE, WIS.

MOTORS

CENTRIFUGAL PUMPS

TEXROPE V-BELT DRIVES

STREAMBARKER

HI-DENSITY FEEDER

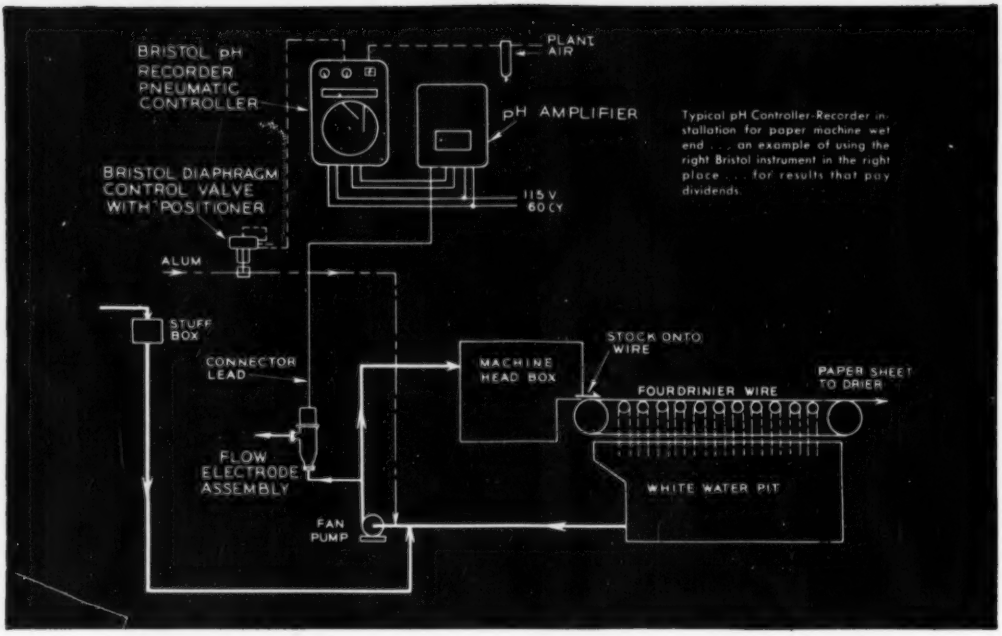
VIBRATING SCREENS

AND OTHER EQUIPMENT FOR PAPER MAKING . . .

A-2738

Hi-Density, Texrope and *Streambarker* are Allis-Chalmers trademarks.

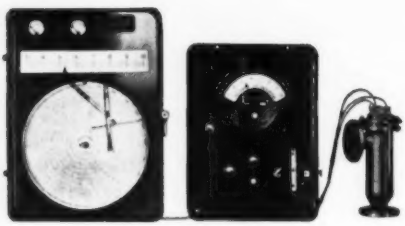
ALLIS-CHALMERS



Typical pH Controller-Recorder installation for paper machine wet end . . . an example of using the right Bristol instrument in the right place . . . for results that pay dividends.

PLANNING TO MAKE WET-STRENGTH PAPERS?

Then Plan to Control pH the Continuous, Automatic BRISTOL *Way*



Air-operated Continuous pH Controller, amplifier unit, electrode assembly. Rugged, vibration-proof construction . . . precision potentiometer measuring system . . . automatic reset adjustment. Hundreds of successful installations.

Get the most out of expensive resins . . . eliminate waste of alum or acid . . . control product uniformity . . . by installing a Bristol Continuous pH Controller at the fan pump.

As the diagram shows, the Bristol instrument continuously measures the pH and controls the flow of the alum or acid to maintain uniformity.

Automatic Bristol control of pH in water treatment, continuous pulp washing, bleaching also helps to reduce costs and improve quality.

Write for Bulletin pH 1302. THE BRISTOL COMPANY, 102 Bristol Road, Waterbury 91, Conn. (The Bristol Co. of Canada, Ltd., Toronto, Ont. Bristol's Instrument Co., Ltd., Lynch Lane, Weymouth, Dorset, England.)

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by

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GEORGE E. LOCKWOOD
President and Treasurer
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F. B. GROSSE
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REPRESENTATIVES

Eastern

BRUCE E. BROWN
FRANKLYN H. OLSEN
15 West Forty-Seventh Street
New York 19, New York
Telephone: PLaza 7-2370

Mid-Western

H. K. VINTON
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MEMBER

ABP ABC

OCTOBER 6, 1949 In This Issue

FEATURES

	Page
Japanese Paper Combine Broken Up	18
Canadian Year Outlook	26
Devaluation Won't Cut Prices	28
Number Eight Newsprint Machine at Powell River	35
Allyl Starch Pilot Production	39
Waldron Machines Improve Coating Processes	43
NMP Classification "Exceptions"	56

DEPARTMENTS

	Page		Page
Trends	7	Materials	46
Mills	10	Imports	46
Forestry	18	Financial Record	49
Associations	22	Foreign	52
Converters	24	Traffic	55
Merchants	24	Production Ratio Report	58
Miscellany	26	Obituaries	58
Suppliers	30	Awards	58
Industrial Development Section	35	Classified Advertising	60
Patent Abstracts	40		
Prices	44		

INDEX TO ADVERTISERS ON PAGE 74

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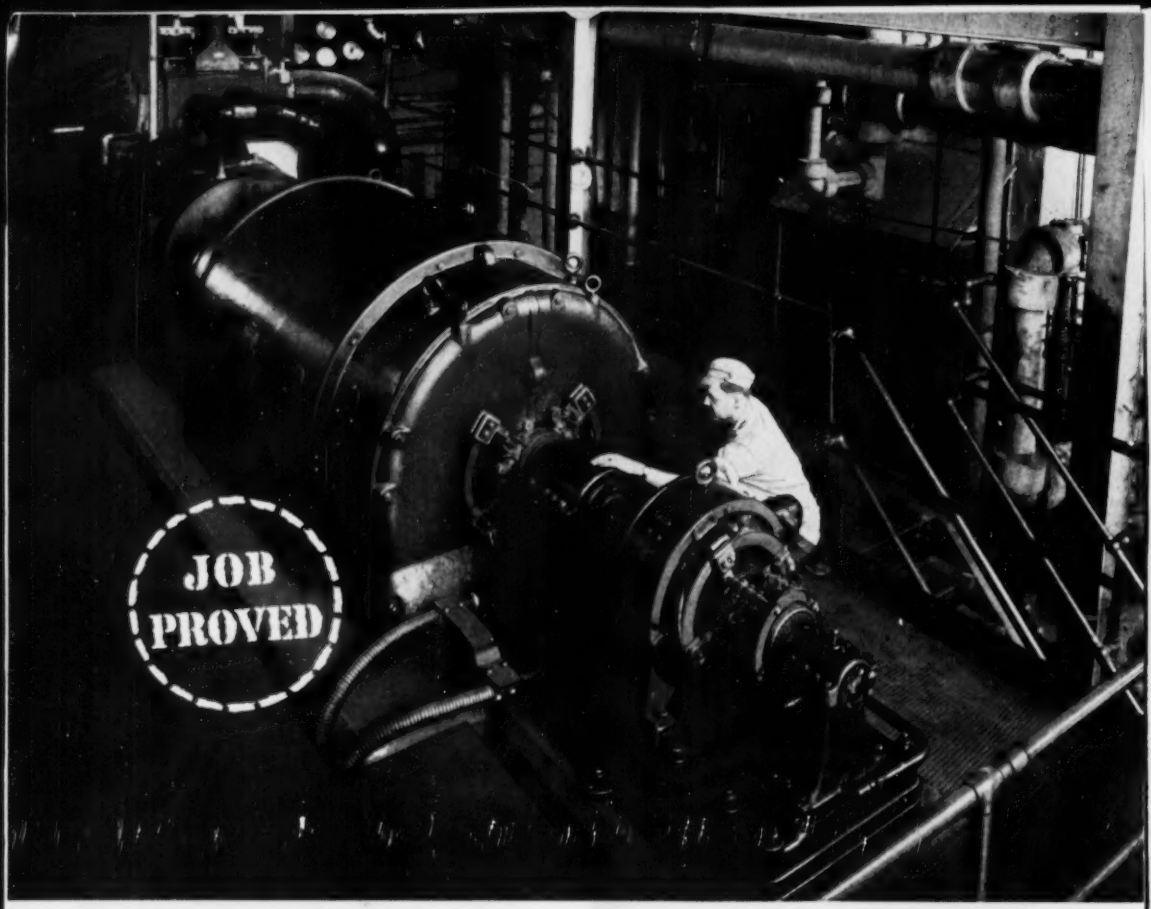

PROTECTED BY SUNVIS 916

Turbine Bearings and Journals Corrosion-Free Despite Summer Shutdowns — Oils Like New After 9,000 Hours

Three years ago, a paper mill overhauled a steam turbine. Thereafter, it was planned to operate this equipment on a 'round-the-clock schedule during the six winter months, and completely shut down in the summer. On the advice of a Sun Engineer, the mill charged the circulating system supplying turbine, generator journals, and governor with Sunvis 916. This oil was chosen because of its "Job Proved" ability to prevent rust and corrosion and to give troublefree lubrication for a long period of time.

The management's selection of Sunvis 916 proved to be sound. After 9,000 hours, a laboratory analysis of the oil showed it to be unchanged—comparable to a sample of new oil. Even more important, inspection showed no abnormal wear and no corrosion in bearings and journals, despite the summer-long shutdown.

The turbine has now operated 12,000 hours without oil-change, and it appears that none will be necessary in the foreseeable future.

All oils in the Sunvis 900 series have a high viscosity index, are fortified against oxidation and sludging, and prevent rust and corrosion. Sunvis 900 Oils are the finest lubricants available for turbines, hydraulic systems, and similar applications. For a free, illustrated booklet on Sunvis 900 Oils, write Department PT-10.

SUN OIL COMPANY · ***Philadelphia 3, Pa.***
In Canada: Sun Oil Company, Ltd.
Toronto and Montreal

SUN PETROLEUM PRODUCTS

"JOB PROVED" IN EVERY INDUSTRY

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Paper TRADE JOURNAL

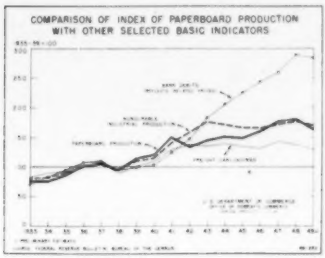
TRENDS

Office of the PAPER TRADE JOURNAL,
Wednesday, October 5, 1949.

Paperboard Outlook

Prices of set-up box boards have advanced again within the last ten days, indicative of sustained strong demand and higher costs of waste paper grades. Chalking up successive rises since August 1 totaling $7.50 a ton, Filled News in the New York area is now $75.00. Plain Chip, with total hikes of $12.50 in the same period, is now $77.50.

Paperboard output is fast becoming a popular and excellent barometer of industry's output in many field, the Office of Domestic Commerce advises, since as a packaging and shipping container for numerous manufactured items it is one stage closer to actual use than most grades of paper. Paperboard production is compared with certain other basic economic indicators in accompanying chart prepared by ODC.



Considerable interest was aroused in the paperboard operating statistics when early in August production recorded a higher level than any time since January and February this year, says the Department. Data for the first week of September recorded even a higher level than for any week during August, and subsequent weeks show still greater gains. Output of paper and paperboard containers during the third and fourth quarters should be somewhat larger than the first-half's volume.

Paperboard Production (Tons)

	Sept. 24 1949	Sept. 17 1949	Sept. 25 1948
Production	202,374	205,128	188,146
New Orders	192,289	197,991	165,103
Unfilled Orders	356,741	369,573	358,586

Percent of Activity, Current, 91%; Year, 80%.

Causes of the upturn in demand as reported by Field Offices of ODC are: apparent end of heavy inventory trimming by customers, sudden renewed buying by many container users, unanticipated sustained consumer demand, earlier than usual holiday and Christmas orders, and the realization of producers throughout the packaging field that the prewar seasonal patterns are returning.

Newsprint Market Churned

Canada's newsprint market is being badly churned by the imbalance in world currencies, vanishing world markets, pressure from U. S. publishers for lower prices, and by the possibility that prolonged major U. S. strikes may blight the reviving economy, react on advertising linage and reduce consumption of newsprint—all at a time when mill and consumer stocks are growing.

Ottawa Comments

OTTAWA—There is no official comment here on the London report that Canada may lose out in the British market when the latter turns to non-dollar areas for supplies of newsprint normally obtained in Canada—the report claiming that Britain is turning to Scandinavian or soft-currency sources in order to get contracts for over 100,000 tons of newsprint for 1950 delivery. It is pointed out that devaluation of the sterling may not be enough to bring this switch from Canadian to Scandinavian supplies of newsprint for the United Kingdom, unless this development is accompanied by a better price than Canada has been able to offer. In the past, Canadian newsprint has been supplied to the UK at better conditions of payment than Scandinavian prices. Consequently there is much uncertainty whether Canada will or not lose the British market for newsprint solely on account of devaluation.

Canada May Cut Output

Commenting on this London report, E. M. Little, president of Anglo-Newfoundland Co. at Grand Falls, said that "the whole industry may be on short time next year but to what extent is difficult to forecast as yet. Conditions are not bright," Mr. Little said, "but this company must become and continue to be competitive." Phillip Grouchy of Anglo-Newfoundland said that sterling devaluation was bound to have serious repercussions on the Grand Falls industry, main market for which was in the UK. (Anglo-Newfoundland was originally formed to supply London Daily Mail, and did so until 1940 when the war forced consumption cuts.)

At Cornerbrook, H. M. Lewin, managing director of Bowaters, Newfoundland, Ltd., said his company likely would meet increased difficulty in finding a market for its sulfite which sells mainly in the UK. He felt that currency devaluation in Norway, Sweden and Finland, however, would probably make it easier for those countries to sell to Britain, ANPA bulletin reports.

Production Indexes

Ratio of production of unbleached kraft paper to potential mill capacity for that product was 82.2 percent for the week ended September 24, compared with 80.3 percent for the preceding week, and with 95.1 for the corresponding week of last year.

Comparative ratios of U. S. paper and paperboard production to mill capacity, as reported by AP&PA are:

	Sept. 24 1949	Sept. 17 1949	Sept. 25 1949	Sept. 27 1947	Sept. 28 1946
Paper	96.0	194.6	99.8	107.0	106.6
Paperboard	91.0	92.0	94.0	102.0	101.0

‡ Revised.

General Business Indexes

Index of general business activity for the week ended September 24 eased to 138.2 from 140.8 in the preceding week, compared with 147.0 in the corresponding week of 1948. Index of paperboard production declined to 185.0 from 187.4 in the preceding week, compared with 170.9 in the corresponding week of 1948.

Consignment Stocks of Pulp

Correcting reports of the preceding week that seasonal heavy buying of wood pulp for *closed water* months would be lighter because of sizable stocks of Scandinavian pulps being retained here: importers state that most of their consignment stocks are sold and that they are booking steadily for *closed water* season.

UNITED STATES IMPORTS OF WOOD PULP—BY COUNTRY OF ORIGIN

(Short Tons)

JANUARY-AUGUST 1949

Grade	Total	Canada	Sweden	Finland	Norway	Mexico	Russia	Nfld. Lab.	Czech.
SULPHITE	495,337	406,974	52,273	28,311	7,775	....	....	....	4
Rayon & Spec.	101,178	98,691	2,483	....	....	....	....	....	4
Other Bleach	178,487	143,628	9,581	17,503	7,775	....	....	....	....
Unbleached	215,672	164,655	40,209	10,808	....	....	....	....	....
SULPHATE	377,100	290,629	65,491	16,441	4,539	....	....	....	....
Bleached	249,305	209,107	39,052	1,146	....	....	....	....	....
Unbleached	127,795	81,522	26,439	15,295	4,539	....	....	....	....
SODA	16,616	16,616	....	....	....	....	....	....	....
GROUNDWOOD	121,159	113,540	1,247	5,738	75	....	....	559	....
SCREENINGS	5,092	5,060	32	....	....	....	....	....	....
Chemical	2,104	2,072	32	....	....	....	....	....	....
Mechanical	2,988	2,988	....	....	....	....	....	....	....
TOTAL	1,015,304	832,819	119,043	50,490	12,389	....	....	559	4

Source: APPA, based on data from Bureau of the Census.

SAVE ON POWER BILLS

WITH GENERAL ELECTRIC SYNCHRONOUS MOTORS

SYNCHRONOUS MOTORS IMPROVE POWER FACTOR

1. **Save you penalty charges for poor power factor**

2. **Release needed generating capacity**

Here's an example:

One mill improved power factor from 72 per cent to 84 per cent by installing a 300 hp .8 leading power factor G-E synchronous motor in place of another motor. This corrected power factor released 260 kva capacity in their generating equipment and allowed installation of additional motors.

These savings in cost of operation are available to you.

Savings in the initial cost of equipment are also available—when synchronous motors are used in their natural fields of application. To find out about these natural fields of application, get in touch with our nearest office.

REMEMBER—General Electric Synchronous motors—whenever you need constant speed. They can give you lower initial cost, lower operating cost. For bulletin information, fill in the coupon:

G-E SYNCHRONOUS MOTOR CONTROL MAKES SURE

G-E synchronous control provides the accurate adjustments that enable you to improve power factor. Here's where details count—where the slightest variation of a pointer on a meter means money saved—or lost. And General Electric has not overlooked these elements. Consider the meters for a moment. Here, G-E has devised a long scale with the pointer in the same plane as the figures so there can be no possibility of misreading the instrument. Anti-glare glass is used so no distortion is possible.

The new smaller rheostat, too, has design features that not only result in longer life but in greater operating convenience and accuracy. The handle has been molded to fit the fingers of the operator—to prevent slippage and over correction. You can be sure, too, that the new field circuit will respond instantly to rheostat adjustment.

Protection is assured the operator through the attractive steel enclosure. The cabinet resists blows, keeps out dirt and other operating hazards. All live parts are strongly guarded. Plant appearance is improved with this control designed to line up with other G-E power units such as switchgear. Ask your nearest G-E office for more information about this equipment that safeguards your investment . . . helps save operating expenses.

Apparatus Dept., Sec. D770-6, General Electric Company
1 River Road, Schenectady, New York

Gentlemen:
Please send me: ☐ GEC-505, Synchronous Motor Control ☐ GEA-5113, High-speed Synchronous Motors
☐ GEA-529D, Low-speed Synchronous Motors

Name _____ Company _____
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GENERAL ELECTRIC

News of the Week

MILLS

Abitibi Applying Finishing Touches

TORONTO—Finishing touches are being put on the new wood preparing, grinding and screening equipment and other rehabilitation measures of the Iroquois Falls newsprint mill of Abitibi Power & Paper Co., in Northern Ontario.

The new grinders, which went into operation in August, bring the rehabilitation of five of the company's groundwood pulp mills up to the modernization program envisaged when Abitibi was re-organized under new management in 1946. A modern groundwood mill was completed at the Port Arthur mill in 1948 with the same type of equipment.

The 57 grinders in the old groundwood mill at Iroquois, some being in service since 1914, have been replaced by 20 modern Waterous hydraulic magazine-type grinders, each with a capacity of about 35 tons of groundwood pulp a day, housed in a new air-conditioned building of reinforced concrete, completely fireproof.

Power is supplied by ten motors of 5,000 h.p. each, and energy will be drawn from the company's generating plants at Iroquois Falls, Twin Falls and Island Falls. Primary screening equipment now consists entirely of Cowan screens, and refiners have been added to treat the coarser screenings. The stock thickening equipment has been improved by the addition of four Sherbrooke filters each having a capacity of 60 tons.

The old grinder room is being converted into a power generating plant with a capacity of 28,000 h.p. from the Abitibi River right at the mill.

$28 Million South African Mill

LONDON—An item in the September 1 issue of *World's Press News* states that the Colonial Development Corp., is planning to establish a $28 million paper mill in South Africa and that a large forest area has been placed under concession. Address of the Colonial Development Corp., and site of the proposed mills were not stated. It is inferred that this will be a newsprint mill. Nature of the timber to be used for raw material was not specified.

Good Blackwater Corn Yield

SHREVEPORT, La.—The second annual "harvest party" held by the International Paper Co. plant at Springhill on September 14 showed that the half-acre of Webster parish hill land, irrigated by black waste water, produced a yield of 60 bushels of corn.

Weight of the corn was checked by J. Y. Oakes, director of the Red River Valley experiment station at Curtis, and R. E. Wright, of the hill farm experiment station at Homer.

Plant officials, releasing statistics on the corn experiment, said that more fertilizer was applied to the plot than is generally used in Webster parish, but that the chief result was to demonstrate that black waste water from the plant had no ill effects.

The plot on which the corn was raised had been flooded with black water five times during the preceding winter, and was irrigated during the growing season.

SEC Approves Power Merger

ALBANY, N.Y. — Merger of the Union Bag & Paper Corp. and the New York Power & Light Corp., both of this city, has been approved by the Securities and Exchange Commission.

Both firms are subsidiaries of Niagara Hudson Power Corp., Syracuse. Under the merger terms, New York Power will issue 100,000 new shares of npv stock to Niagara Hudson in exchange for the holding company's 5,000 shares of Union Bag & Paper Power Corp., common stock. Union Bag and Paper properties will be merged with those of New York Power and Light after the stock transfer.

ROBLEY A. BUTLER

—recently appointed technical control supervisor at the Ocean Falls division of Pacific Mills, Ltd., Vancouver, B.C. . . . He was previously employed in a technical capacity with the Crown Zellerbach Corp. for ten years, except for three and one-half years with the U.S. Navy.

Ask Judgment for Fire Fighting Cost

OTTAWA—What is believed to be the first effort made to hold a fishing or hunting club responsible for the costs of fighting a forest fire on Crown lands was made when the Canadian International Paper Co. filed legal action to recover $8,950.08 it spent in fighting a forest fire in May, 1949, with the legal proceedings being started in the Superior Court of Quebec at Campbell's Bay against the Amos Fishing Club.

The writ alleges that a member of the club and his guests passed through the area under discussion shortly before the fire commenced and claims that the club is responsible for the actions of its members and their guests.

The fire burned through approximately 500 acres of Crown lands near Lake Tudhope, north of Maniwaki, a short distance from Ottawa.

Eastern States Deal Upheld

BALTIMORE — Eastern States Corp. won back the right to go through with its stock-trading offer, under which holders of Eastern States preferred stock may exchange their shares for common stock of the St. Regis Paper Co., when Federal Judge Coleman ruled on September 26 that there was no evidence of fraud in the plan and said he would order dissolution of a temporary injunction obtained by Arthur H. Brown. The judge added that, unless good reason is shown to the contrary within five days, he would dismiss Mr. Brown's bill of complaint.

Eastern States' offer was made August 31 and expired September 30.

Treat Bags to Resist Infestation

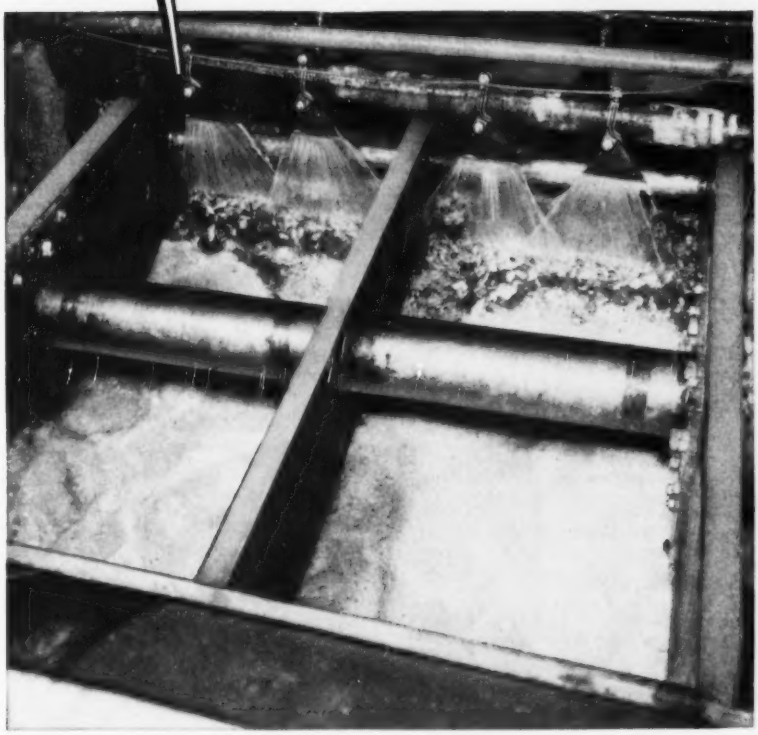
NEW YORK—A multiwall kraft paper bag treated with pyrenone to resist insect infestation has been developed through the joint efforts of the St. Regis Paper Co., and U. S. Industrial Chemicals, Inc., manufacturer of pyrenone and a pyrenone treating process. The treated bag is intended for shipping flour into hot, humid insect breeding areas. Laboratory tests of the treated bags were conducted by the American Institute of Baking and the Institute of Paper Chemistry. Commercial shipment tests were conducted by Pillsbury Mills, Inc.

START CLEANING UP HERE!

Today pulp and paper has got to be clean in order to sell.

Jonsson Screens get the dirt, knots, bark and shives before they have a chance to get broken up into the specks that are so hard to remove later on.

For knotting there's nothing like the Jonsson Screen. Ask us to prove it.



JUST THE TICKET FOR DEINKED STOCKS

Jonsson Screens have the capacity and the ability to whisk out wet strength paper, cellophane, paper clips, rubber bands, string and what have you. There's hardly any loss of good fibres in the rejects. The deinking system never gets clogged up or slowed down.

2000 Jonsson Screens are now on the job all over the world. They *must* be good! Are you making the most of them?

BIRD MACHINE COMPANY

South Walpole, Massachusetts

GORDON W. BUTLER

—recently named as manager of sales personnel and training of the Dixie Cup Co., Easton, Pa. . . . Mr. Butler was formerly associated with the Radio Corp of America, Victor Division.

End-Label Style Revue

MENASHA, Wis.—At the Marathon Corp. foreman's dinner, held here September 25, the company, celebrating its tenth anniversary as manufacturer of bread package end labels, staged an "End Label Style Revue"

Girl employes of the firm fashioned costumes and accessories ranging from bathing suits and formals to jewelry and millinery out of the labels to compete for prizes.

The prizes were presented by Carl Geisler, Marathon's director of personnel, to the winners. In addition to the winning costumes selected by the judges, the foremen themselves, awarded a prize for what they thought was the outstanding costume.

Considering Two Pulp Mills

COEUR D'ALENE, Ida. — The Coeur d'Alene area has been selected as the site for a $5,000,000 pulp mill of the Idaho-Montana Pulp & Paper Co., W. F. Emory, president, told the city's Junior Chamber of Commerce on September 28. Mr. Emory added that the company has taken an option on 180 acres of land on the Spokane river, adjoining the Ohio Match Co. plant at Huetter with the consideration reported in the neighborhood of $25,000.

A similar plant also is proposed for Polson, Mont., company officials state.

Dunn's 25th Anniversary Observance

PORT HURON, Mich. — Theodore Dunn, president-treasurer of the Dunn Paper Co., has issued invitations to an observance of the 25th Anniversary of the Dunn Paper Co., at the Chateau, 1402 Military street, from five to seven o'clock, October 9.

K. C. Sales Meetings Held

NEENAH, Wis.—About 100 members of the Kimberly-Clark Corp. sales force recently completed a series of service meetings here.

Chief topic at the meetings was more effective selling through greater knowledge of products. Similar sessions were held for salesmen of Kimberly-Clark wadding products, Kimsul insulation, Kimpak packaging materials and Sanek.

J. R. Kimberly, vice-president in charge of sales; Ernest Mahler, executive vice-president; C. H. Sage, H. G. Boon and W. H. Clifford, vice-presidents; and W. R. Kellett, general superintendent, participated.

A. G. Sharp, administrative assistant to Mr. Kimberly, was in charge of the program. Contributing to the program were J. B. Catlin, manager of the paper sales division; R. B. Sawtell, wadding; T. D. Ward, advertising and promotion; C. W. Miller, general sales office; R. A. Brabbee, sales training manager, and C. S. Marty, market research manager.

In-Plant Education

ERIE, Pa.—Establishment of a comprehensive three-year pulp and paper course at the Penn State Technical Institute, Behrend Center, is disclosed by the Hammermill Paper Co.

The course, open to all Hammermill men and women will get under way October 6, with a lecture and discussion on "The History of Paper Making" by R. P. Price, vice-president.

Free to all Hammermill employes, the first-year course will consist of 26 lectures of a general nature for which no prior knowledge of pulp or paper is necessary. These lectures will be presented on Thursday evenings, but for the benefit of those employes who because of shift work can not attend the Thursday session, each lecture will be repeated the following Monday evening.

The second-year course is of a more technical nature and will be presented on Tuesday evenings to a maximum of 24 employes who must meet certain standards and be approved by an enrollment committee.

The third-year course will be offered in the Fall of 1950.

Master Meters for Holyoke Mills

HOLYOKE, Mass. — The Holyoke Water Department disclosed on September 30 that it was ready to proceed with its program of installing master meters in three papermaking plants here to replace a number of small meters scattered throughout the buildings.

Initial step calls for constructing seven meter pits to house the master apparatus. They will be seven feet wide, 11 feet long and six feet deep, the walls to have 12-inch bricking and the floor made of eight-inch concrete slab. Three of the pits will service the Chemical Paper Mfg. Co., two will handle the water flow to the Newton Paper Co., and the remaining two will be set up at the Franklin Paper Co.

Combined Locks Files With SEC

WASHINGTON—The Combined Locks Paper Co., Combined Locks, Wis., has filed a registration statement covering 50,000 shares of its Class A common stock, $1 par value, to be offered for sale by certain of the firm's stockholders, the Securities Exchange Commission disclosed on September 30.

OSWEGO FALLS-SEALRIGHT HOSTS HEARNSMEN

The Oswego Falls-Sealright Co., Inc., container and closure plant at Fulton, N.Y., was host recently to top salesmen of the Hearn Paper Co., Youngstown, Ohio . . . In the picture are, squatting, left to right: Leonard Hammer, Ray Knipfer, William Shanahan, Ward Charlesworth and Robert Meagher, administrative assistant at Sealright . . . Standing, left to right: R. S. Weeks and Charles Maynard, sales office co-ordinator and sales supervisor, Sealright; Ray Hum, sales manager, Hearn Company; Clarence Scheidemantel, John Kile, Sam McPhillamy and R. Reid McNamara, Sealright sales manager; Ray Wittenauer, Andrew Andrich, Elmer Stocker, Paul Wimer and Emil Johnson.

TENAX FELTS

—excellently made—carefully tested
—with all the qualities to help you *make better paper*—at lower operating cost

IN THE LABORATORY OF THE LOCKPORT MILL

Numerous and thorough tests are applied at each stage of production of Tenax Felts, to insure attainment of the excellence which contributes to the high quality of your paper—the efficiency of your operation.

The Lockport representative in your territory is fully qualified to advise on all technical questions relating to felts. He is at your service as is our plant and all its people. We invite your inquiries.

LOCKPORT FELT COMPANY · NEWFANE, NEW YORK

ATTENDING RECENT STRATHMORE ADVISORY COUNCIL MEETING

—at the Strathmore Advisory Council meeting at the Strathmore Paper Co., September 15-16 . . . FRONT ROW: W. E. Porter, Cook-Vivian Co., Inc., Boston; Fred Schlosser, Schlosser Paper Corp., New York; Robert Schmidt, Miller & Wright Paper Co., New York; O. W. Mielke, Blake, Moffitt & Towne, San Francisco; T. H. B. Smythe of the J. L. N. Smythe Co., Philadelphia; Eric A. Rohrer, Swigart Paper Co., Chicago (Chairman of the Advisory Council); George E. Williamson, president, Strathmore Paper Co.; James D. Bligh of the Barton, Duer & Koch Paper Co., Washington, D.C.; Guin C. Olson, Nackie Paper Co., Milwaukee; Jack Green, Carpenter Paper Co., Omaha; A. H. Martins, Alco Paper Co., New Orleans; H. J. Foulds, of the Alling & Cory Co., Rochester, N.Y.; G. E. Caskie, Jr., Caskie Paper Co., Lynchburg, Va.; and W. N. Stetson, Jr., of the Storrs & Bement Co., Boston. . . . REAR ROW: Harry E. Riggs, vice-president in charge of sales, Strathmore Paper Co.; Abbott Kimball of the Abbott Kimball Co., New York; Nelson Feeley, sales correspondence manager, field sales, Strathmore and S. Guy Ashley, vice-president and sales manager, Old Colony Envelope Co., Westfield, Mass. . . . Also: George Maxwell, assistant treasurer and auditor; C. M. Bryan, vice-president in charge of manufacturing, Robert A. Bagg, sales promotion department, W. A. McGilpin, manager of New York office and field sales, and L. W. Shattuck, assistant to vice-president in charge of manufacturing . . . J. A. Chadbourne, president, Old Colony Envelope Co. . . . F. Nelson Bridgham, vice-president and treasurer, Henry D. Johnston, assistant to president, Robert B. Clark, Jr., manager of advertising and sales promotion, Irving Barnes, chief accountant, Paul A. Wilks, assistant treasurer and comptroller, P. P. Gooding, technical director and H. A. Bolles, superintendent of No. 2 Mill, Woronoco . . . Henry C. Johnson, superintendent of finishes, Roy F. Arnold, product development manager and field sales, P. G. Volanakis, manager of technical papers, W. G. Holmes, head of order and production planning and field sales, Strathmore Paper Co.

FRANCIS A. DENNIS

—newly named assistant general superintendent of the Diamond Match Co.'s plant at Plattsburg, N.Y., comes to Diamond from Sitroux, Inc., where he was plant superintendent for 18 months . . . Previously he spent nearly 25 years with the Scott Paper Co. in production-management capacities. When Scott purchased the International Paper mill at Fort Edward, N.Y., in 1946 Mr. Dennis supervised its rehabilitation and the selection of new machinery. He was superintendent of that plant when he transferred to Sitroux.

Central Paper Co. Election

MUSKEGON, Mich. — Central Paper Co. stockholders on September 23 elected the following directors for the ensuing year: Louis Bittner and John G. Turnbull of New York, and E. C. Farmer, John E. Minty, Adam Pyle, Jr., C. W. Smith and R. D. Terrien, of Muskegon. The following officials were re-elected: C. W. Smith, president; E. C. Farmer, vice-president and general counsel; R. D. Terrien, secretary-treasurer; John McIntosh, assistant treasurer; Boyd Knepper, assistant secretary and Mark Potter, assistant secretary.

Anti-Pollution Order Issued

MIDLAND, Mich.—The Rocky River Paper Co., Three Rivers, Mich., was charged on September 28, with polluting the St. Joseph River at Three Rivers and ordered to see that on or before May 1, 1950, fibre loss shall not exceed one per cent of production. A progress showing must be made to the chief engineer of the Michigan water resources commission on or before January 1, 1950.

Mrs. Camwell Team Captain

PHILADELPHIA — Mrs. Louise H. Camwell, accountant with the Paterson Parchment Paper Co., Bristol, Pa., has been named captain of the paper and publishing team of the Philadelphia Chapter of the National Ass'n., of Cost Accountants. Mrs. Camwell is the first woman to hold such an office since the founding of the Philadelphia Chapter 29 years ago. Her team will vie with other teams in the accountants' organization in a drive for members, funds, and participation in Chapter activities.

Copeland Trophy Winner

OTTAWA—The Copeland Trophy was won by the Fireboard mill team in the annual Canadian International Paper Co., Ltd., golf tournament. The winning team which comprised the Fireboard mill itself, the Plywood mill, and Masonite mill, won out over the Gatineau mill team by one point. Some 160 CIP golfers toured the Tecumseh layout and attended the dinner which followed. Members of the winning teams included J. Melville, H. Savory, P. McMahon, W. Leclair, F. Guay and B. Cosgrove.

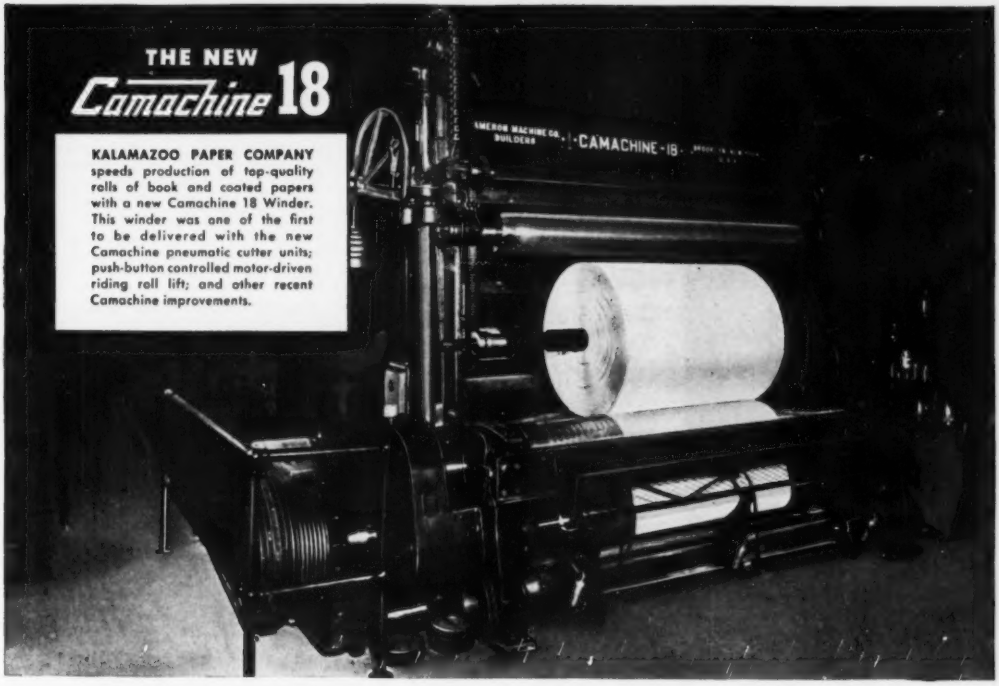
Kiwanis Nominates Hayes

ROANOKE, Rapids, N. C. — George Hayes, wood manager at the *Halifax Paper Co.*, was the only nominee for president of the Kiwanis club, when the report of the nominating committee was made on September 22. Mr. Hayes is vice-president of the Roanoke Rapids club and lieutenant governor of Sixth division clubs in North Carolina.

Fox River Ups Barney

APPLETON, Wis.—H. O. Barney has been named assistant purchasing agent of the Fox River Paper Corp. He will continue as manager of the Fox River cost department. K. V. White, manager of the accounting department, has been assigned additional responsibilities in the realignment.

5 Great NEW Values
IN SLITTER-WINDER PERFORMANCE


THE NEW
Camachine 18
KALAMAZOO PAPER COMPANY speeds production of top-quality rolls of book and coated papers with a new Camachine 18 Winder. This winder was one of the first to be delivered with the new Camachine pneumatic cutter units; push-button controlled motor-driven riding roll lift; and other recent Camachine improvements.
CAMACHINE-18

NEW CAMACHINES are faster and more dependable than ever. They are easier to adjust and to operate, and are far more responsive to controls. They set unmatched standards for safety and precision. Investigate these five new engineering values.

***NEW!* PNEUMATICALLY CONTROLLED PRESSURE ON CUTTER WHEELS AND CUTTER SPACER BAR.** Assures whistle-clean slitting through longer runs at mile-a-minute speeds. A single control lever sets and maintains uniform pressure on the entire line of cutter wheels. No slow, separate cutter adjustments. No overloaded cutter units. Standard on all new mill-type Camachines.

***NEW!* PUSH-BUTTON CONTROLLED MOTOR-DRIVEN RIDING ROLL LIFT.** Say "goodbye" to another tedious manual operation. Speed up roll changes and add valuable minutes of productive machine and operator time. Standard on Camachine 20; optional on Types 19, 18 and 14.

***NEW!* PNEUMATIC BRAKE ON DRIVE AND IDLER ROLL.** A simple one-hand control brings the fastest, heaviest winder to a s-m-o-o-t-h, quick stop, by braking the drive roll *and* the idler roll simultaneously. This new brake corrects one of the most serious danger spots in big winder operation. Standard on all new mill-type Camachines.

***NEW!* MOTOR-DRIVEN ROLL EJECTOR.** Automatic power—to move the heaviest rolls swiftly and safely to unloading position. So gentle that not a single layer of paper can be damaged. Operates with no more effort than ringing a doorbell. Standard on Camachines 20, 19 and 18; optional on Type 14.

***NEW!* HYDRAULIC ROLL UNLOADING TABLE.** Cushions finished rolls from the winder to the floor in a smooth eight seconds, with push-button stop-and-hold control. The perfect ending for a precision roll-winding operation. Optional equipment on all machines.

Consult with your Camachine representative for complete information regarding these five new developments, and for the facts about other exclusive Camachine features which have been designed to give you faster production of better rolls.

GOOD NEWS!
These new cost-cutting features can be applied to many existing mill-type Camachines! Why not find out now how you can improve the service of your present winder equipment? Write for information.

CAMERON MACHINE COMPANY • 61 POPLAR STREET • BROOKLYN 2, N. Y.

Camachines FOR FAST, TOP QUALITY ROLL PRODUCTION
. . . the world over

AA-212

Warren Open House

CUMBERLAND MILLS, Maine — The S. D. Warren Co. held its first open house September 22-24 and the consequence was that the experiment was a big success. More than 10,000 persons toured the mill.

The idea was born in the oft-expressed wish of employes that their families and friends could see them at work. Finally an open house was suggested to management. Seizing quickly on the idea was Mill Manager Elmer P. Ingalls, who said he thought the suggestion "excellent." "We are only too happy to turn over the mill to the employes for the event," he added. The Open House Committee included these chairmen: Dan Foley, tickets and invitations; Earl Allen, parking; Glenna Pellerin, reception; Tim Pomerleau, program folder; John MacHardy, route planning and marking; Adrian Leconte, safety and guidance; Charles Roberts, housekeeping and decoration; Philip Leighton, exhibits; Louella Hallowell, refreshments; Ruth Elwell, souvenir; and Harold Lord, publicity. Refreshments were served and each guest was given a souvenir book containing pictures and text on the art of paper making at the S. D. Warren Co., and a roll of five sheets of Christmas wrapping paper.

Miss Alice LeMay of the Reception Committee pins an "Open House" tag on Arch Lewis, who has been with the S. D. Warren Co., for more than 66 years. Arch said he wouldn't need a guide to make the trip through the mill.

Barry to Hollingsworth & Whiting Co.

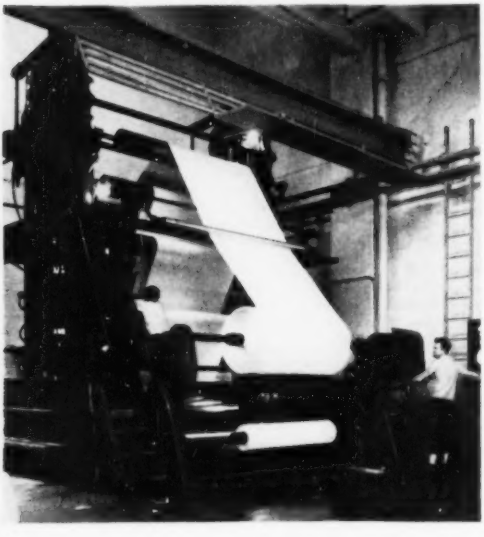
WATERVILLE, Maine — Thomas M. Barry became assistant manager of Northern Mills of the Hollingsworth & Whitney Co., on October 1. Mr. Barry comes to his new post from Fraser Paper, Ltd., Madawaska, Maine, where he was mill manager.

Lawrence, Comm. Chest Co-Chairman

KALAMAZOO, Mich. — Wallace Lawrence, assistant treasurer of the Sutherland Paper Co., has accepted the key post of co-chairman of the industrial division of the 1949-50 Community Chest drive.

Accountants, Hammermill Guests

ERIE, Pa.—A group of 55 accountants, members of the Erie chapter of the National Assn., of Cost Accountants, toured the Hammermill Paper Co., plant Sept. 27.



One of the big new calendar stacks at the S. D. Warren Company, Cumberland Mills, Maine. It is one of two which recently began operation.

WTM Veteran Feted

MENASHA, Wis. — Joseph Kryszak, superintendent of the papermaking department of the Wisconsin Tissue Mills Corp., was presented with a gold watch on September 23, at a dinner party in his honor to mark his 25 years service with the firm. The dinner was attended by A. W. Asmus, president of the tissue mills, and other associates of the firm.

Industrial Sewer Outlet

MEMPHIS—The International Paper Co. of Mobile, Ala., has applied for permission from the Vicksburg District Corps of Engineers to construct an industrial sewer outlet on the bank of the Mississippi River. The plans call for three 30-inch corrugated steel or other metal pipelines to be buried in the river's bank.

K'zoo Workers Choose IBPM

KALAMAZOO—Production and maintenance employes of the Kalamazoo Vegetable Parchment Co. again chose the IBPM as collective bargaining agent at their recent election. The vote was 841 for the AFL union, 291 for the CIO UPW and 31 for no union.

Bartholomew to Mando

MINNEAPOLIS — Paul W. Bartholomew has been appointed assistant sales manager of the paper division of the Minnesota & Ontario Paper Co. He comes to Mando from the Hawthorne Paper Co., Kalamazoo, where he had been technical director since 1945.

Gould Paper Co., Opens N. Y. Offices

NEW YORK — Gould Paper Co., Lyons Falls, N. Y., subsidiary of the Continental Can Co., has opened a New York sales office at 100 East Forty-Second street (Telephone MU-3-4100) in charge of Edward J Sullivan, eastern sales manager.

Protective Papers Re-elects All

UNION, Ill.—Protective Papers, Inc., has re-elected all officers, as follows: Roy Anderson, president; J. C. Taylor, vice-president and general sales manager; John Willy, vice-president in charge of production; and Paul Sukup, treasurer.

St. Joe Assessed Valuation $2,350,000

PORT ST. JOE, Fla. — Following a conference between the City Commission and St. Joe Paper Co., the latter was placed on the tax roll at a valuation of $2,350,000. Valuation of the mill on the county tax roll is $2,483,973.

Reynolds' Clark to Gair

NEW YORK—The Robert Gair Co., Inc., has named Richard T. Clark as an assistant sales manager of the folding cartons division in charge of Gair-Reynolds Foiline cartons. He was formerly with the Reynolds Metals Co.

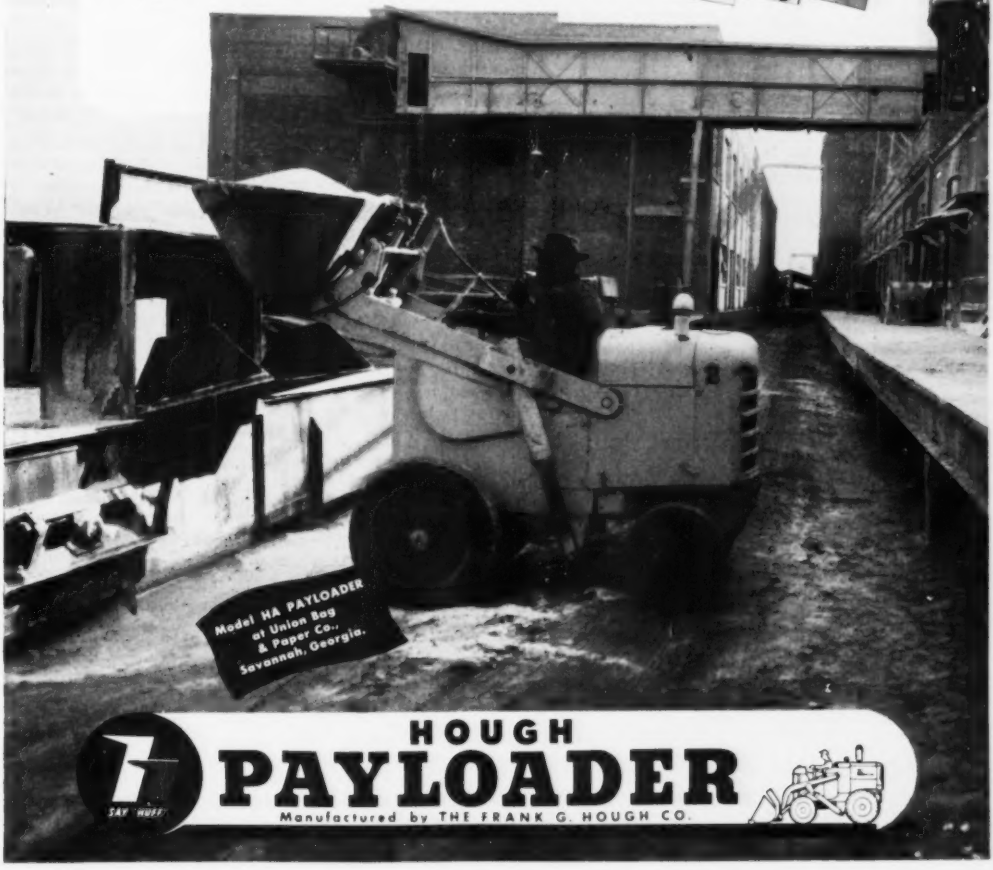
DESIGNED FOR BULK HANDLING

Pulp, paper and paper product mills *do* benefit directly from the *design* of a PAYLOADER. That's because its power, strength, speed and maneuverability were planned specifically to provide fast, low-cost handling of such *bulk* materials as salt cake, limestone, alum, clay, soda ash, starch, rosin, sulphur, fillers, coal, ashes, waste, bales, barrels and snow.

PAYLOADERS have the horsepower, pneumatic tire traction and speed to scoop up full bucket loads of any bulk materials under adverse conditions and carry them *fast* to disposal points over floors, pavement and even bare ground, mud and snow. Their high lift and full bucket control permit them to dump into containers, hoppers, bins, conveyor aprons or trucks—high or low, slow or fast—by fingertip-controlled hydraulic power . . . also to windrow, pile, spread and grade. A 10½ cu. ft. Model HA PAYLOADER, as pictured, can unload box cars at rates up to 50 tons per hour.

Hundreds of mills and plants are solving their normal loose material handling problems with one or more sizes of PAYLOADERS, also using them for *extra* jobs such as snow removal, yard and floor clean-up, dump leveling and grading. It will pay you to investigate the basic reasons for PAYLOADER'S outstanding performance—facts based on 28 years of material handling experience. The Frank G. Hough Co., 747 Sunnyside Avenue, Libertyville, Illinois.

SEND FOR LITERATURE on the 10½ cu. ft. Model HA PAYLOADER, the ¾ yd. Model HF, the 1¼ yd. Model HL or the 1½ yd. Model HM—also the 2 yd. PAYLOADER BUGGY.



Japanese Paper Combine Broken Up

EDITOR'S NOTE: Various inaccuracies in the story about the breaking up of the Japanese Paper Combine, reported in the August 11 issue of *Paper Trade Journal*, are pointed out in letters received from K. Ashina, liaison manager of the Jujo Paper Mfg. Co., Ltd., Tokyo, Japan, under dates of September 19 and 21. To set the record right, Mr. Ashina's letters are presented herewith:

September 19, 1949

Dear Mr. Heitzeberg:

It was with pleasure to read in the August 11 issue of *Paper Trade Journal* an article entitled "Japanese Paper Combine Broken Up" under the Column "Foreign" in which article somewhat detailed information is given regarding the disintegration of Oji Paper Mfg. Co., Ltd., and the resultant formation of three independent firms.

However, we wish to point out with good intention that the said article contains quite a few figures and pieces of information which we consider are misleading and therefore should be corrected. On the attached sheet [See tabulation herewith] are listed corrections against the figures and information quoted from your magazine.

We shall feel truly indebted to you if you will be kind enough to give some space to these corrections in *Paper Trade Journal* at your early convenience.

We would mention in passing that our company is one of the three new firms formed following the dissolution of Oji Paper.

With best wishes, we remain,

Yours very truly,
K. Ashina, Liaison Manager

cc. Tomakomai Paper Mfg. Co., Ltd.
Honshu Paper Mfg. Co., Ltd.

P.S. We are also enclosing a copy of our memo containing brief information on the status of the three new concerns.

Dissolution of Oji Paper Mfg. Co., Ltd.

Oji Paper Mfg. Co., Ltd., the foremost paper manufacturing company in Japan, was disintegrated into three new and independent companies on August 1, 1949, pursuant to the provisions of the Elimination of Excessive Concentrations of Economic Power Law. Particulars of the three new companies are as follows:

(1) *Tomakomai Paper Mfg. Co., Ltd.* — Address: 3 Ginza 4-chome, Chuo-ku, Tokyo. Capital: ¥ 400,000,000 fully paid up. Representatives: Keiji Nakajima, president; Yoshiatsu Otsuka and Matasaburo Kinoshita, vice-presidents. Number of mills: 1. Name of mill: Tomakomai Mill, Hokkaido. Products: Newsprint, printing and wrapping papers. Present monthly production: 20,000,000 lbs., of which 70/80 percent is represented by newsprint.

(2) *Jujo Paper Mfg. Co., Ltd.* — Address: 4 Kobiki-cho 3-chome, Chuo-ku, Tokyo. Capital: ¥ 280,000,000 fully paid up. Representatives: Itsuki Nishi, president; Tanzo Nishikage, vice-president. Number of mills: 7. Names of mills: Kushiro Mill, Hokkaido; Jujo Mill, Tokyo; Fushiki Mill, Toyama Prefecture; Miyakojima Mill, Osaka; Kokura Mill, Fukuoka Prefecture, Kyushu; Yatshushiro Mill, Kumamoto Prefecture, Kyushu; Sakamoto Mill, Kumamoto Prefecture, Kyushu. Products: Newsprint, printing, wrapping, drawing, cigarette and other fine papers. Present monthly production: 20,230,000 lbs.

(3) *Honshu Paper Mfg. Co., Ltd.* — Address: Oji Building, 3 Ginza 4-chome, Chuo-ku, Tokyo. Capital: ¥ 250,000,000 fully paid up. Representatives: Takeji Tanabe, president; Satoshi Yamanouchi, vice-president. Number of mills: 6. Names of mills: Edogawa Mill, Tokyo; Fuji Mill, Shizuoka Prefecture; Iwabuchi Mill, Shizuoka Prefecture; Nakatsu Mill, Gifu Prefecture; Yodogawa Mill, Osaka; Kumano Mill, Wakayama Prefecture. Products: Printing, writing, drawing, wrapping, cigarette and fine papers and paper board. Present monthly production: 10,700,000 lbs.

September 21, 1949

Dear Mr. Heitzeberg: *Corrections to be made re: an article entitled "Japanese Paper Combine Broken Up" in the August 11 issue of Paper Trade Journal*

Supplementary to our air mail letter of September 19 (our ref. No. 21), we wish to point out that in the above-mentioned article there is another figure calling for correction.

The concluding paragraph of the article (page 52) reads in part "——— this year's production, with luck, may touch *500,000,000 lbs.*," but from the showing of the past eight months it is generally anticipated in the industry that Japan's overall production of paper during 1949 will easily reach 800,000,000 lbs.

In addition to this figure, incidentally, 1949 output of paper board and straw board in this country is expected to exceed 237,000,000 lbs., and that of Japanese style paper 280,000,000 lbs., of which about 4.5 percent will be accounted for by hand-made paper, the bulk being machine-made.

If you will be good enough to have this correction inserted in *Paper Trade Journal*, we trust that you will do a lot of justice to the paper industry of this country.

Thanking you in advance for your kindness in this matter, we remain,

Years very truly,
K. Ashina, Liaison Manager.

Mr. Ashina's Corrections

Subject of Article: Japanese Paper Combine Broken Up
Heading under which article appeared: Foreign

Page	Column	Paragraph	Quotation from P.T.J.	Correction
50		3rd	(2) The *Tosuji* Paper Mfg. Co.	The *Jugo* Paper Mfg. Co.
52	1st	1st	Tosuji, Fushigi and Toshima	Jugo, Fushiki and Miyakojima
52	1st	1st	Kishibuchi	Iwabuchi
52	1st	2nd	*26,000,000* lbs. respectively	*20,228,000* lbs. (This figure represents a monthly effective capacity of 44 grinders, 10 of the installed 54 grinders being not in operation.)
52	1st	3rd	The Tosuji Mill	The Jugo Paper
52	1st	3rd	*26* paper machines	*28* paper machines
52	1st	3rd	*seven* grinders with an aggregate capacity of *3,276,000* lbs.	*twenty-seven* grinders with an aggregate capacity of *11,622,000* lbs.
52	1st	4th	two grinders capable of producing *10,681,000* lbs. *of newsprint pulp* a month	*eleven* grinders capable of producing *4,836,000 lbs. of groundwood pulp for printing, wrapping and Manila board* (Honshu Paper is not manufacturing newsprint.)

FORESTRY

New Bid Delays Decision

DENVER—The U. S. Forest Service held up closing the contract for sale of three million cords of western Colorado beetle-infested Englemann spruce to the Columbine Development Co. following receipt of another bid on the timber on September 30.

Negotiations with Columbine had been regarded as virtually completed, but a bid entered by a Colorado logging operator, T. W. Schomburg of Denver, has delayed the sale until the forestry practices, economic development and actual cash involved in the two bids can be studied by the timber management division of the Forest Service.

The Columbine Development Co. has proposed construction of a 15-million dollar pulp mill to be located in the timber area. Its plans call for a plant with a capacity of 240 tons of newsprint and sulfate pulp per day.

The Schomburg operation, it is understood, calls for a smaller mill located in Denver.

Timber Operating Commission Urged

FORT WILLIAM, Ont.—Formation of an operating commission with jurisdiction over the cutting and sales of all timber in Ontario's forests was proposed in a resolution adopted at a public meeting here September 26. The meeting was a continuation of a convention, adjourned August 28, called primarily to find ways of improving employment at the Lakehead, but which became involved in other matters relating to the natural resources of the province. The proposed change in the province's forest harvesting system suggested the provincial government terminate existing cutting rights and make no further contracts. The commission would control and administer all Crown forests, supplying paper and lumber mills their needs up to only the amounts which could be cut without forest depletion.

Ten-Point Forestry Policy

TORONTO—While the public and politicians rant about wanton destruction of Ontario's forests, Canada's pulp and paper producers are today gearing their operations to a ten-point forestry policy designed to increase the output and maintain yield of the forests in perpetuity.

The Canadian Forestry Ass'n in 1946 adopted a policy which calls for an increased knowledge of forest inventories; sustained yield forest manage-

New

MOORE & WHITE Rotary Steam Joint

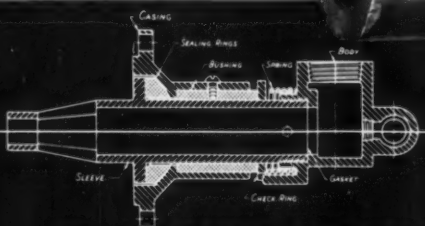
weighs only 12 pounds!

This improved, extra-light Rotary Steam Joint is expertly engineered and precision-built. Low in cost, it will give years and years of satisfactory service. It is made from a special aluminum alloy, treated to Moore & White specifications, and weighs only 12 pounds—as compared with the conventional joint weighing up to 90 pounds. No supports are necessary. It is simple in construction—extremely easy to handle and install. Just bolt it to the end of the dryer journal and make the necessary connections.

The Moore & White Rotary Steam Joint needs no lubrication. Graphite bushings are held in place by screws designed to prevent binding of the sleeve. This assures a steam-tight fit, and eliminates leakage. The joint is made to withstand up to 400 pounds test pressure, several times the maximum pressure used.

Call or write us for further information concerning this major Moore & White contribution to paper-making efficiency. If you desire an estimate, please supply the following data:

1: **Diameter of end of dryer journal.** ***2:*** **Diameter of hole in journal.** ***3:*** **Bolt circle and size of bolts.** ***4:*** **Diameter of steam inlet.** ***5:*** **Diameter of exhaust pipe.** ***6:*** **Size of siphon pipe.**



The MOORE & WHITE Company

15TH STREET AND LEHIGH AVENUE PHILADELPHIA 32, PA.

CUSTOM-BUILT MACHINES FOR MAKERS OF PAPER AND PAPERBOARD

RHODE ISLAND TREE FARMERS

John O. Pastore, Governor of Rhode Island, fourth from left, congratulates his state's first certified Tree Farmers . . . From left to right are: Ernest Wescott, Lincoln; Edward Vock, Burrillville; Walter D. Kenyon, Hopkinton; Governor Pastore; A. M. Stearns, Allenton; Earl Dodge, Block Island. Standing behind the Governor is Christopher T. Houston, representing Thomas P. Hazard, of Peacedale . . . Rhode Island's Tree Farm program (the nation's 26th) was inaugurated at Hopkinton, R.I., on September 16.

ment; maximum use of all forest products; greater efforts to reduce losses by fire, insects, etc.; long-term tenure on forest lands.

While the operators, the Association reports, are now engaged in implementing the policy on their own limits, complete implementation depends on the degree of government support provided, the level of general trade in the industry, and the economic position of the individual producer.

Here are the ten points laid down in the forest industry:

(1) By means of aerial and other surveys there must be an increased knowledge of the forest inventories, both in leased areas and in the unoccupied forests.

(2) Sustained yield forest management should be applied by all units in the industry.

(3) Efforts of the forest industries and the governments should be coordinated to reduce losses by fire, insects and disease.

(4) Each forest operator should obtain and apply knowledge and methods which increase the yield per acre and shorten the period of rotation.

(5) The maximum use should be made of all products of the forests; logging operations should be integrated to cut and deliver most efficiently all disposable products.

(6) The pulp and paper industry will seek to increase the efficiency of its logging operations by the introduction of mechanical equipment.

(7) There should be an increasing efficiency in utilization of woods labor.

(8) In order to permit the forest management plans, the tenure of forest lands should be on a long-term basis. Areas suitable only to forest growth should be set aside permanently as forest areas.

(9) Operators should seek to provide and protect the heavy capital expenditures necessary to place forest holdings under sustained yield management on a basis which will yield reasonable returns on the investment.

(10) The Pulp and Paper industry will seek to encourage efficient forest management on private lands.

Asks Speedier Forest Management

WASHINGTON — Faster progress in providing for proper management of the Nation's forests is called for by postwar studies of the problem, Representative George A. Dondero, of Michigan, said in a prepared statement in the House late in September.

"In Michigan," he said, "the seeding and planting programs which were stopped during the war have been renewed but need to move forward much more rapidly."

Considering the acreage of lands available for timber growing, said the Congressman, forest land management in the United States is still in its infancy. He said there is much this country can learn from the intensive experience of several Western European countries, although the problems are somewhat different.

"The most promising aspect of the situation is the increasing concern and somewhat stepped-up action on the part of the Federal government, the States, and citizens' groups," said Mr. Dondero.

The war served to emphasize the importance of productive forests, he continued.

"But postwar studies of forest conditions point up the need of much faster progress in providing adequate management of the Nation's forest estate if its lands are to provide the timber and other forest benefits which the Nation will require in the future," he added.

Major proposals for accomplishing these ends, he said, include protection from fire, insects and disease; assistance to small forest land owners in management of their woodlands; a large-scale tree-planting program, to reforest between 75,000,000 and 100,000,000 acres; extension of good forest management as soon as possible to all commercial forest lands, public or private; a number of these proposals, said the Congressman, are covered by pending legislation before Congress.

Carey Steers Pulpwood Demonstration

MENA, Ark. — Rex Carey, conservation forester of the International Paper Co., who was in charge of a pulpwood thinning and marketing field day demonstration and barbecue at the John Faulkner farm south of Cherry Hill, in collaboration with the Rich Mountain Soil Conservation District, on September 27 told of a service which Internatonal offers to landowners, under which the company will mark for sale the trees on any tract of land from five to 5,000 acres. The only compensation International asks is that such pulpwood be sold to some buyer who will ship it to the International mills, Mr. Carey said.

Mr. Carey told his audience of about 100 persons of his company and the particular work he did. He said that his company is dependent on privately-owned timber to supply its mill at Springfield, La. and is, therefore, interested in conservation, so that there will be a continual supply of pulpwood.

Other speakers were V. L. Masey of Hope, Ark., a general superintendent of the company, Buford Poe of Fort Smith, district conservationist of the Soil Conservation Service, and M. L. Markell, Jr., of Dierks, state district forester.

Among the visitors was Miss Edna Potter of Shreveport, who is in the public relations department of the International Paper Co., and Elbert Leslie, wood procurement superintendent of the Springhill mill. Representatives of various agencies, also interested in conservation, present were:

Jim Case, state forester of the Soil Conservation Service; Buford Poe, Fort Smith, district conservationist with the SCS; Bill Faucheux of the State Forestry Commission, Bill Lincoln, director of GI Farm Training and B. D. Faught, with the Farm Home Administration all of Little Rock; Diaz Day, Fort Smith, with the Westark Production Credit Ass'n.; W. T. Carroll of Cherry Hill, who had with him 14 members of his Vocational Training class; V. E. Taylor, Mena, district ranger, with the Ouachita National Forest, and Titus Manasco, Polk county agent.

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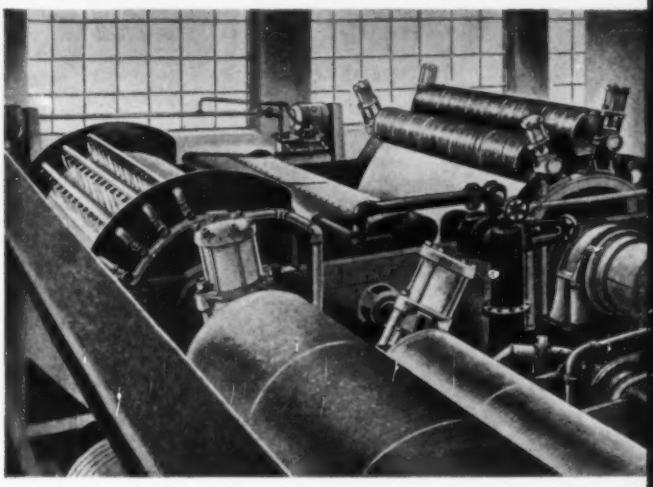

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Reforestation Classification Hearings

PORTLAND, Ore. — Reforestation classification hearings will be held in six western Oregon counties late in November, George Spaur, acting state forester, reported on September 24.

These hearings are held for private timber-land owners and tree farm operators to aid in retaining ownership of cut-over and immature forest lands by means of equitable tax policies, he said. Oregon law was designed for that purpose.

The local hearings will be held by the county courts by Dean Paul M. Dunn, member of the state board of forestry, and Homer G. Lyon, state reforestation director.

Champion's King Discusses Ammate

JASPER, Texas—Lud E. King, conservation forester of the Champion Paper Co., on September 22 described a demonstration plot showing the benefits of killing out undesirable hardwoods in pine forests by the use of ammate when he addressed a group of 125 timberland owners and other forestry-minded individuals at a meeting of the Independent Pulpwood Producers, Inc., the Jasper Chamber of Commerce and the Texas Forestry Service.

House Passes S.J. Resolution 53

WASHINGTON—The House passed S. J. Resolution 53, during the last days of September, thus clearing for the President's signature the measure for a 15-year program of reforestation of public forest lands, and revegetation of range lands in national forests. The program covers an estimated 2,200,000 acres of national forest lands, and 4,000,000 acres of grazing lands.

ASSOCIATIONS . . .

S. W. Supt's. Oct. Meet

ROANOKE, Va.—Sidney R. Brown of the National Container Corp. of Virginia, Big Island, Va., chairman of the Southeastern Division of the American Pulp & Paper Mill Superintendents Assn., Inc., reports the following program for the 1949 fall meeting of the Division at Hotel Roanoke, October 14-15:

Highlighting the program are several papers on stream pollution. The subjects of these papers and their respective authors follow: "The Relation ship Between Increased Re-use of Paper Machine White Water and Slime Control," by Charles P. Kirchen, technical service representative, Buchman Laboratories, Inc.; "Stream Pollution from Virginia Pulp Mills," by A. H. Paessler, acting executive secretary, Virginia State Water Control Board; "The Paper Industry Problem in the Southeast", by Russell L. Winget, executive secretary, National Council for Stream Improvement; and "Methods of Waste Treatment", by Sam Evers, chemist, James Lees & Sons.

Other papers on the program include: "The Plain Press of Tomorrow", by Jacob V. Edge, Downingtown Mfg., Co.; and "Jordon Plug Pressure Control System", by Bruno E. Prevost, Emerson Mfg. Co.

Wert Faulkner, vice-president, Virginia Mfr's., Assn. is to be the guest speaker at the dinner meeting on the evening of October 14; While Alvin Tuten, paper mill superintendent, North Carolina Pulp Co., Plymouth, N. C., is the speaker for the noon luncheon that day.

The morning of October 15 will be given over to a business meeting, with election of new officers, and a trip through the semi-chemical pulp and paper mill of the National Container Corp., Big Island, Va.

A smörgåsbord luncheon, complimentary of Samuel Kipnis, President, National Container Co., will be served that day at the Natural Bridge Hotel, Natural Bridge, Va.

The rest of the afternoon and evening will be given over to golf and to entertainment.

Charles Reese of the Nekoosa-Edwards Paper Co., Port Edwards, Wis., national president of the Superintendents Assn., is to participate in the program of the banquet meeting that closes the convention.

A program also has been worked out for the ladies, including a fashion show, and visit to the James Lee & Son rug factor at Glasgow, Va., as well as participating jointly with the men at the dinner meetings on both days of the convention and the smörgåsbord luncheon at noon-time of the second day.

The present officers of the Division, in addition to Sidney R. Brown, include R. C. Bullock, Acusta Paper Corp., Pisgah Forest, N. C., first vice-chairman; Carl Welte, Champion Paper & Fibre Co., Canton, N. C., second vice-chairman; and Cecil B. Curry, National Container Corp. of Virginia, Big Island, Va., secretary-treasurer.

New National Safety Council Members

CHICAGO—Recent additions to membership in the Pulp and Paper Section of the National Safety Council are: Coosa River Newsprint Co., Coosa Pines, Ala., George R. Koons, personnel superintendent; Charles Bruning Co., Inc., New York City, H. M. Dickman; Corning Fibre Box Corp., Corning, N. Y., Robert S. Cole, assistant treasurer; and British Columbia Pulp & Paper Co., Ltd., Woodfibre, B. C., G. C. Dubberley, safety director.

Metropolitan TAPPI Meet

NEW YORK—The Metropolitan section of TAPPI will meet at Fraunce's Tavern at 6:45 P.M., October 11, when George Brooks, research and educational director of the International Brotherhood of Pulp, Sulphite & Paper Mill Workers, is scheduled to address those attending on "The Viewpoint of Labor in Collective Bargaining".

New England SAPI Meetings

BOSTON—The first *closed* meeting of the New England SAPI will be held in the South Station Restaurant at 12:30 noon, October 11. The next *open* meeting will be held at the Parker House on October 24, when E. W. Tinker, executive secretary of the American Paper & Pulp Ass'n., will speak.

Thornton Addresses Mich. Supt's.

KALAMAZOO—The 1949-1950 monthly dinner meetings of the Michigan Division of the American Pulp & Paper Mill Superintendents Ass'n., Inc., at Hotel Harris, September 15, was at-

SAFETY CONFERENCE PULP AND PAPER SECTION

Conducting a pulp and paper session at the Maine State Safety Conference at Poland Spring on September 14-15 are, left to right: Clifford Haddrell of the Yale & Towne Mfg. Co., Boston; Edward L. Lincoln, safety director, S. D. Warren Co., Cumberland Mills, Maine; and Frank C. Morrison, assistant superintendent, Penobscot Chemical Fibre Co., Soda Division, Great Works, Maine.

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Fig. 560—200-pound Bronze Regrinding Horizontal Swing Check Valve with screwed ends, screwed-on cap and regrindable, renewable bronze disc.

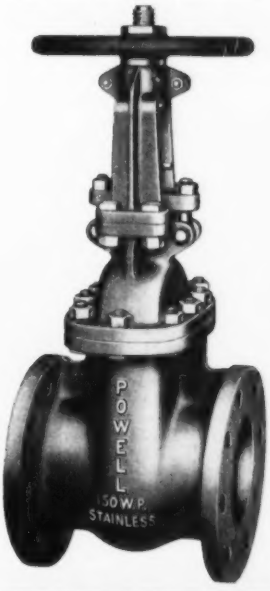

Fig. 2453-G—Large 150-pound Stainless Steel Gate Valve. Bolted flanged yoke-bonnet, outside screw rising stem and tapered solid wedge. Made in sizes 5" to 30", inclusive.

Fig. 500 — 125-pound Bronze Gate Valve with screwed ends, screwed-in bonnet, inside screw rising stem and tapered wedge: solid in sizes ¼" to ¾"; double in sizes 1" to 3".

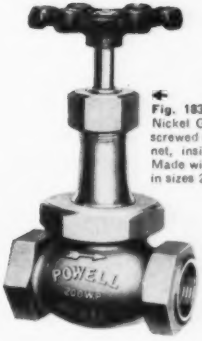

Fig. 1837 — 200-pound Nickel Globe Valve with screwed ends, union bonnet, inside screw stem. Made with bolted bonnet in sizes 2½" and 3".

Fig. 1828 — 200-pound Monel Metal Gate Valve with screwed-in bonnet, screwed ends and inside screw rising stem.

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tended by approximately 60 members and guests.

Featured speaker was James S. Thornton of the Downingtown Mfg. Co., Downingtown, Pa., whose subject was Fourdrinier Auxiliaries.

Mr. Thornton used a number of interesting lantern slides in making his presentation and following his talk, answered a number of very pertinent questions put to him by his listeners. His audience also contributed further information on the subject by entering into open discussion.

During the early part of the meeting, Herbert Johnston of the Allied Paper Mills, Kalamazoo, Mich., was presented with a framed certificate as a token of appreciation of the Division for the job he did last year as chairman of the Division. The presentation was made by Glen Sutton of the Sutherland Paper Co., Kalamazoo, third vice-president of the national organization.

Charles Reese of the Nekoosa-Edwards Paper Co., Port Edwards, Wis., president of the parent Association, spoke briefly of Association aims and plans for the year ahead.

Harry E. Weston, associate secretary-treasurer of the Association, Chicago, also spoke, commenting on some of the work of the Association.

Supt's. Gimmick Contest Winners

PISGAH FOREST, N. C.—Raymond F. Bennett of the Ecusta Paper Corp. as chairman of the judges committee of the Gimmick contest of the American Pulp & Paper Mill Superintendents Ass'n., Inc., that concluded with the Atlantic City Convention this year, has announced the winners of the contest, as follows:

First prize went to Franklin J. Reilly, 831 North LaSalle street, Chicago, for his entry describing a vacuum slice for a cylinder board machine. Carl L. Hackbarth, Hacienda Paramongo, Supe, Peru, was winner of the second prize. His entry describes a wire or felt warning signal. No third prize was awarded since, in the opinion of the judges, the other material submitted for consideration did not warrant such action. Members of the committee of judges, in addition to Mr. Bennett, included William H. Brydges, Lynchburg, Va., and Raymond L. Barton, Michigan Paper Co. of Plainwell, Plainwell, Mich.

N. E. Supt's. Elect Brosius

POLAND SPRING — Arthur J. Brosius of the Brown Co., Berlin, N. H., was elected chairman of the Northeastern Division of the American Pulp and Paper Mill Superintendents Ass'n., at the annual Fall meeting in the Poland Spring House on September 23. He succeeds Andrew F. Tolland of Rumford.

Others elected are John Coppens of the Frazer Paper Co., Madawaska, Maine, first vice-chairman; James M. Wishart of the Oxford Paper Co., Rumford, Me., third vice-chairman; and Mrs. Maria L. Steward of Lincoln, N. H., secretary-treasurer.

Leona Smith of the Downington Mfg. Co., Downington, Pa., and Bruno E. Prevost of the Emerson Mfg Co., Lawrence, Mass., presented technical discussions on the paper making industry. George W. Craigie, New York, national secretary-treasurer of the association, spoke on safety in paper mills.

CONVERTERS . . . .

Huntting Co., in New Hands

SPRINGFIELD, Mass. — The H. R. Huntting Co., internationally-known bookbinding firm, has been sold to a New York syndicate headed by Anthony E. Brendel and Harold Lee Stephens, former president of the National Printing Co., Thompsonville, Conn.

As spokesman for the new owners, Mr. Brendel said "the present business and employee personnel will be maintained, and a carefully prepared plan of expansion of company activities will be undertaken during the coming year."

Mr. Brendel, who is also vice-president of A. J. Armstrong, Inc., New York, and a director of the Stuyvesant Insurance Co., has assumed the office of president and treasurer. Mr. Stephens is vice-president and general manager, and Arthur T. Messon clerk and assistant treasurer.

Four Founders' Sons on Board

DALLAS, Texas — Four young men, each a son of one of the four men who founded the Dixie Wax Paper Co., now have places on the board of directors, Louie C. Kimple, president, reports.

The company was founded in 1922 by Mr. Kimple, William H. Bryce, the late Thomas S. Williams, Jr., and the late Stuart Moore.

Louis T. Kimple, Stuart Moore, Jr., and William H. Bryce, Jr., were added to the board on September 21. Thomas S. Williams III was made a director a short time ago. The election raised the board membership to ten.

Box Co. Safety Record Honored

BUFFALO, N. Y.—The Electric City Box Co., which won recognition for no lost time in the Tenth Annual Accident Reduction Contest for Buffalo area firms sponsored by the New York State Insurance Fund, was honored at a safety-celebration banquet in Hotel Statler, recently.

Burt Leaving Watertown

WATERTOWN, N. Y.—The F. N. Burt Co., manufacturer of paper boxes, is terminating its local operations. E. L. Sparling, manager, has been transferred to the Burt plant in Philadelphia and some of the personnel have returned to the Buffalo plant.

Four-Acre Printing Plant

BALTIMORE—The Lord Baltimore Press, manufacturer of folding boxes and producer of commercial lithographing and printing, plans to build a $1,250,000 one-floor printing plant which will cover four acres of a 33-acre site.

MERCHANTS . . . .

Merchant's Sales—August

WASHINGTON—Sales of a reporting group of paper and paper products wholesalers in August totaled $7,616,000, off five percent for a year earlier, the Bureau of Census reported.

August sales were 22 percent higher than in July. Sales for the first eight months this year were 11 percent under those of the same period of 1948.

Geographically, panels in New England reported August sales unchanged from a year ago, but 16 percent higher than in July, while ten percent lower in the eight months of 1949 under review than in the same period of 1948.

New York, New Jersey and Pennsylvania firms reported August sales up 22 percent over July, and six percent below those of August, 1948.

South Atlantic wholesalers showed a nine percent gain in August sales over July, but with sales 18 percent under those of August last year.

August sales on the Pacific coast were 19 percent higher than a year earlier, and up 40 percent from July.

Morris Spotlights "Living Letters"

NEW YORK — Charles V. Morris, vice-president of Reinhold-Gould, Inc., will be guest m.c., when L. E. (Cy) Frailey, letter writing counsellor and author of the "Handbook of Correspondence", and other books, opens a series of lectures at the Barbizon-Plaza hotel on October 11.

Mr. Morris lectures on business correspondence at C. C. N. Y. and promotes the use of paper with "living letters" clinics. At the recent, DMAA Conference in Chicago, he conducted the Letterwriting Clinic.

Hubbs & Howe Greensboro Branch

GREENSBORO, N. C.—The former Mid-South Paper Co. recently absorbed by the Hubbs & Howe Co., and now operated as a Hubbs & Howe branch, presently has 12 men selling out of Greensboro. T. J. Watson is general manager of the branch. He was formerly eastern representative of the Detroit Sulphite & Paper Co., Detroit. Assistant manager in charge of fine papers and of the container department is M. C. Barbee. J. T. Alexander is sales manager. Also connected with this operation are Robert L. Cole of Rockingham, N. C., and W. D. James of Hamlet, N. C.

Milton Resumes Sales Forums

Opening session of the third annual series of Milton Sales Forums sponsored by the Milton Paper Co. was held at Masonic Hall, on September 16.

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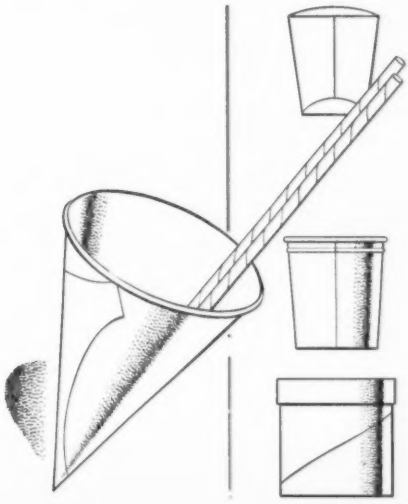

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MISCELLANY

Canadian Year Outlook

By CHARLES H. L. REID

TORONTO—As the pulp and paper industries near the final quarter of the year it can be seen that production and sales records for 1949 are going to be slightly under the 1948 figures. Practically all lines of paper products are now available in satisfactory quantities and it is once again necessary for sales staffs to do a spot of selling. Some surpluses have developed in woodpulp but the newsprint division is still humming with activity. Present production levels of the pulp and paper firms means that manufacturers are turning out about twice the volume of products produced in pre-war years and the gross value of which runs about four times the pre-war average.

The over-all production of the industry in 1948 was close to an estimated $900 millions, when the Newfoundland figures are added. Without Newfoundland, the Canadian figures were above $706 millions—about $100 millions above the previous year.

The volume of production during 1948 was 260,000 tons higher than the 7.7 million tons produced in 1947. Newsprint production was up over three percent, woodpulp 5.3 percent. Fine papers and building papers, etc., for which final figures are not available, will probably be around the 1.5 million tons mark this year. Pulpwood production for the 1948-49 cutting season was down approximately 20 percent.

While production of all divisions this year will be a little less, both in volume and value, newsprint is likely to show an increase of probably five percent, which would indicate production of this item of about 5.3 million tons, including Newfoundland, at the contract price of $100 a ton, worth $530 millions.

Market woodpulp shows a substantial reduction from last year, both in production and prices. Exports to the U. S. are running 27 percent below last year, at the rate of approximately 1.2 million tons yearly. The dollar value of export pulp is only about 15 percent below last year. On this basis pulp exports would run about $177 millions, compared with 211.6 millions in 1948. However, woodpulp exports could recede during the remaining months of the year.

Fine papers and building papers have held relatively strong, both in production and market value, during the year to date. About 80 percent of the dollar value of these products is sold on the domestic market and the balance is sold largely to Commonwealth export markets. This year, however, exports of all paper, other than newsprint, have dropped 45 percent in dollar value, due primarily to the inability of traditional markets to pay out dollars for paper products.

Exports of pulpwood are also down slightly from last year, about 9 percent in the first five months. That would mean that the total pulpwood going to the U. S. market for the year would be around 1.8 million cords, compared to the two million cords sent last year. Dollar value of export pulpwood will likely be down from last year's $43.6 millions. It is estimated that the over-all production for the year, in spite of the recessions mentioned, should reach the $800 million figure.

Newsprint shipments to overseas markets are down more than seven percent from last year. Sales to South America are down almost 50 percent; sales to the Orient are down approximately 30 percent in the first six months. The reduction in exports of newsprint to these markets has had relatively small effect due to the ability of the U. S. market to absorb the extra tonnage.

Reduction in overseas shipments of woodpulp, however, has had a more serious effect, since it coincides with a current surplus of pulp in the North American market. ECA funds kept Canadian pulp shipments going well into the early months of this year, but producers in this country can no longer depend on support from that quarter. Import restrictions and currency troubles are other factors responsible for the reduction in overseas exports of fine papers as well as other types. Commonwealth countries have been the traditional markets for these products, but they are in the Sterling block and cannot afford the dollars.

Canadian producers are eager to retain as much as possible of these Commonwealth markets, not only because of former connections, but because a single market for pulp and paper products makes the Canadian manufacturer particularly vulnerabe to the whims and fluctuations of U. S. economy. The shortages that developed during the war years and immediately thereafter, turned many buyers to other sources of supply, particularly to the establishment of newsprint plants, not only in the U. S. and Alaska, but in other countries. The shortage of dollars has forced several countries to seek self-sufficiency in pulp and paper products. Many of Canada's newsprint customers are attempting to build their own newsprint industries. Some of these will be successful, others, it is said, could turn out to be costly failures.

The Canadian newsprint industry has consistently held that the soundest way to increase production is by getting the most out of existing capacity. They point out that in Canada output in 1948 was 150,000 tons higher than it was in 1947 and 457,000 tons higher than in 1946. This increase was accomplished without new high-cost mills.

The Financial Post estimates that there is more than a billion dollars invested in pulp and paper companies across Canada. In 1948 it provided 51,000 permanent jobs apart from woods workers. Salaries and wages paid to these workers rose to a total of approximately $146 millions, an increase of nearly $17 millions over 1947.

Payments to wood workers last year totalled nearly $132 millions. Canadian governments received about $100 millions in taxes or about $12 to $15 millions more than in 1947. Pulp and paper, in addition, last year contributed almost $300 millions to other industries in purchases of goods and services. This could be broken down roughly as: transportation, $134 millions; chemicals, $58 millions; fuel, $36 millions; electric power, $27 millions; food and fodder, $28 millions.

Stability in the pulp and paper market is important to Canada, because the industry has always been a major earner of U. S. dollars, and since the war has led all other industries in this respect. Last year exports of pulp, paper and pulpwood were $671.8 millions excluding Newfoundland, which was about 21 percent of Canada's total exports. Only a small part of Canada's surplus production of these items can be absorbed at home.

So far this year no significant newsprint surplus has appeared, but spot market prices have dropped sharply from their last year highs and are now down to the contract level of $100 a ton; some cases have been reported where small tonnages have been sold below this level. Unless the demand for newsprint drops off sharply in the last quarter, it is expected the present contract price will remain firm for the balance of the year.

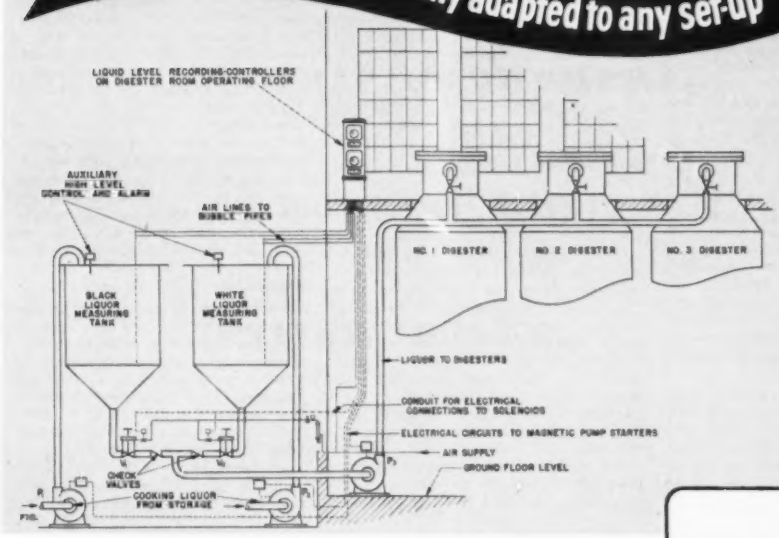
In the newsprint industry there have been no new mills coming into operation, but there have been some tentative steps taken towards establishing new mills—one in the Maritimes and one in Alberta—but actual construction has not started. It is not known whether these plans will be followed through at the present time in view of the return to a more normal supply-demand condition.

In the pulpwood division growth has been in increased capacity of existing mills as well as a number of new mills. Increasing demand for kraft, or sulphate pulp, has resulted in the construction of three new mills having a total projected capacity of some 160,000 tons annually. This production capacity will bring the total capacity for industry in Canada to 900,000 tons annually and will come into operation progressively in the next two years. In addition there is the construction of a new rayon pulp mill in British Columbia.

Canada's fine paper industry and paper board manufacturers are, in some respects, the strongest segment of the pulp and paper industry. They have been built primarily to serve the domestic market and are not affected to nearly the same degree by external economical factors. Prices so far this year have held firm in spite of a reduction in exports.

According to the *Financial Post*,

Better Control of Liquor Charges to Digesters...Easily adapted to any set-up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AIR LINES TO BUBBLE PIPES
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NO. 2 DIGESTER
NO. 3 DIGESTER
BLACK LIQUOR MEASURING TANK
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CONDUIT FOR ELECTRICAL CONNECTIONS TO SOLENOIDS
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AIR SUPPLY
GROUND FLOOR LEVEL
CHECK VALVES
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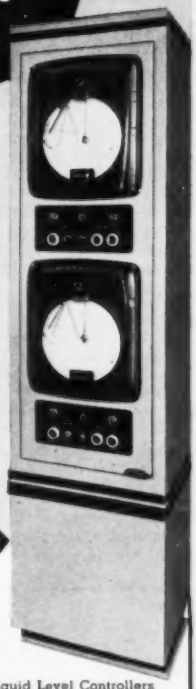

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Accurate, uniform charges of liquor to digesters can be depended upon, day in and day out, year after year, when this modern packaged control system is installed. The chart gives a permanent record of the amount of liquor used; improvements in product quality and uniformity show up almost immediately.

This control system is equally adaptable to set-ups having measuring tanks on the digester operating floor, on the ground floor, outside the digester building, or any other mill layout.

Your operators, too, will appreciate how easy it is to run this system. Merely setting a control index and pushing a button is all that's needed in normal operation. The Foxboro Automatic Digester Liquor Measuring System does all the rest — charges the digester and refills the measuring tanks.

By combining the simplicity of the widely used air bubble principle of liquid level measurement with the efficiency of Foxboro's Rotax Electrical Controller, you are assured of continuous trouble-free operation. Foxboro liquor measuring systems have been in continuous operation without maintenance for as long as 10 years.

Cabinet Equipment

- 2 Rotax Liquid Level Controllers for White and Black Liquor
- Simple, Push-Button Stations
- Red and Green Signal Lights
- Manual Valve and Pump Control for Emergency Use

Foxboro Automatic Digester Liquor Measuring Systems come completely assembled in attractive, rugged, dust-proof steel cabinets. Piping and wiring is pre-engineered at the factory. Only the simplest of connections are needed to start operation.

Are **you** profiting by these advantages? Write for complete details. **The Foxboro Company, 114 Neponset Avenue, Foxboro, Mass., U.S.A.**

FOXBORO Reg. U.S. Pat. Off. **AUTOMATIC DIGESTER CONTROL**

many observers believe it is in the non-newsprint paper division that the Canadian pulp and paper industry has the greatest possibility for future growth. Since the war the possibility of increasing U. S., dollar earnings by exporting more converted paper products has been widely discussed. There are still considerable quantities of converted paper products being imported from U. S. Last year Canada imported a total of $17.2 millions worth of paper products apart from books or printed material, much of which came from the U. S. Canadian pulpwood and woodpulp are being exported to the U. S. and Canada is buying some of it back at a higher price in the form of converted paper products.

Fine paper manufacturers in Canada explain that it is uneconomic for them to manufacture some of these imported products because of the limited market. The solution to this paradoxical question would seem to be an expanding trade in pulp and paper products between the two countries, under the stimulus of lower tariffs, with each country making those products which can best be adapted to their respective resources.

Canadian capacity to produce pulp and paper is constantly expanding and the demand for such products throughout the world is said to be far from satisfied. Artificial barriers to trade, particularly currency problems, have made the demand ineffective. Until these problems are ironed out internationally, it is likely that the pulp and paper industry in Canada will have to depend still more on the U. S. as an outlet for its products.

Devaluation Won't Cut Prices

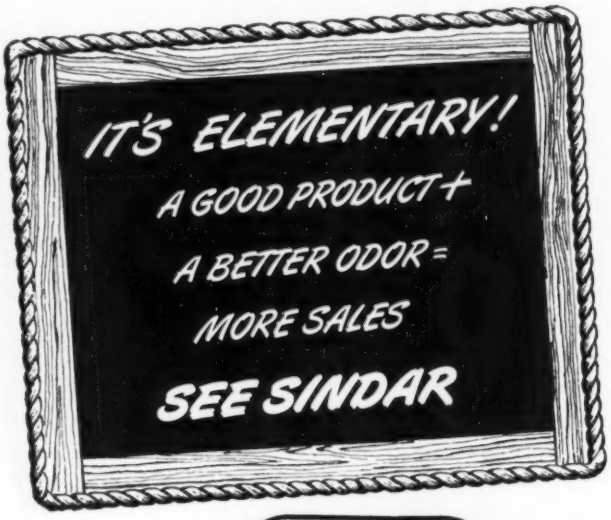
By M. L. Schwartz

OTTAWA—The prevailing viewpoint now is that present signs indicate that the devaluation of the Canadian dollar will not bring any change in the price of Canadian newsprint for United States buyers, though there is a growing opinion that some pressure from across the border may be exerted before long for price cuts in some cases. At least, it is known that such pressure is actually anticipated and may come soon.

However, it is pointed out that, though Canadian newsprint producers are heavy earners of American dollars and their operations in this respect are valued highly here, yet this does not favor such producers as a result of the devaluation of the dollar because they will still have to pay more Canadian dollars in order to get essential supplies of raw materials which in significant quantities are brought from the United States. Such Canadian newsprint producers will have to pay the higher charges anticipated for coal, sulphur, freight rates, etc. In short, if Canadian newsprint producers are to operate profitably, they may find it tough to lower their prices for the American customers at this time when there is fear that costs of production may even go up in spots and their markets overseas are threatened following the sharp devaluation of the pound sterling.

According to usually reliable sources, it is estimated that Canadian newsprint shipments are holding up well under current conditions of production. In fact, it is estimated that in the first seven months of this year approximately three million tons or over five percent more than last year have been shipped by Canadian producers, with roughly 84 percent or more going to the U. S., about nine percent to other foreign markets and the balance to domestic customers. The meaning of this shipping trend can be seen when it is reported that actual operations of the Canadian newsprint mills are said to be about the same as of last year when already such mills operated over their rated capacity or approximately 102 percent.

Still there is some thought being given now to the fact that some markets for Canadian newsprint may be contracting at a more rapid rate than previously, accelerating a trend which had been observed earlier in this postwar period. So far the U. S., has absorbed a steadily increasing amount of Canadian newsprint, jumping up from approximately 75 percent of Canadian shipment in 1945 to about 83 percent last year. Consequently, the impor-



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As a further service to its customers, The Fafnir Bearing Company is adding a line of Spherical Roller Bearing Pillow Blocks to amplify its range of power transmission units. The Fafnir line will then provide for every conceivable pillow block requirement—speed, load and operating condition—in light, standard and heavy duty series—ball or roller bearing type.

The Spherical Roller Bearings for these units will be manufactured by The Torrington Company, well-known name in this specialized anti-friction bearing field. Fafnir Spherical Roller Bearing Pillow Blocks will be available *only* as complete units: Torrington spherical roller bearings will be sold only by The Torrington Company.

Fafnir Spherical Roller Bearing Pillow Blocks will be distributed in the same manner as Fafnir Ball Bearing Pillow Blocks. First shipments will be made about January 1, 1950. Literature listing the complete range of sizes and types will be available at a later date; meanwhile, your inquiry, with specifications and blueprints, is cordially invited.

The Fafnir Bearing Company
New Britain, Connecticut

tance of the United States market cannot be overestimated at a time when other foreign customers are known to want Canadian newsprint but are unable to purchase same on account of exchange difficulties, with rumors having that the United Kingdom as a customer may eventually almost disappear or shrink heavily, especially since it is believed that the British plan to develop their own production and to seek supplies of raw materials or finished products within other parts of the sterling area. Then again, Canadian producers are noting that reports are coming in about plans under consideration by some of her customers, such as India, Brazil, Argentina, Australia, New Zealand and others, to establish their own newsprint developments, even if there is considerable scepticism amongst experts here about the actual immediate effects of such plans.

Therefore, bearing in mind that the U. S., consumption of newsprint in 1949 may exceed the already high tonnage of 1948 and that Canadian suppliers are concentrating more heavily than ever to meet American needs, it is believed here that no drastic changes are likely to follow the devaluation of the dollar, even if there are stories about likely pressure coming from the U. S., customers in some instances for price readjustments, particularly as changes in inventory positions come along to indicate greater balance between supply and demand.

Fire Prevention Week

CHICAGO—Fire Prevention Week is observed each year during the week in which October 9 falls, to focus public attention on loss of life and destruction of property by fire. Fire Prevention *Day* was first observed throughout the United States on October 9, 1911. It began when the Fire Marshals' Ass'n., of North America suggested that the 40th anniversary of the Chicago Fire be set apart for bringing to the public the much-needed lesson of fire prevention.

In 1920, President Wilson issued the first National Fire Prevention Day proclamation, but it was not until 1922 that the whole week in which Fire Prevention Day (October 9) occurs was officially proclaimed Fire Prevention Week by President Harding, to be observed, "by every man, woman, and child, not only during the week designated in this pronouncement but throughout every house on every day of the year."

No Jobs for Outsiders

OTTAWA—Sufficient manpower is on hand in the Port Arthur district this year to occupy all vacancies for bushworkers during the coming winter, the Department of Labor reports. In a letter to offices of the National Employment Service, Deputy Minister of Labor Arthur MacNamara urges that job-seekers be warned that there will be no vacancies in these lumber camps this coming winter.

Canadian Car Loadings

OTTAWA—Canadian Government announces car loadings of revenue freight on the railways advanced to 3,783 cars of woodpulp and paper in the week ending September 17 compared with 3,051 cars in the preceding week, though below the 4,254 cars of the corresponding week a year ago.

The Eastern Division increased to 3,303 cars in the week as against 2,665 cars in the previous week but below the 3,703 cars in the similar week a year ago. The Western Division advanced to 480 cars this year during the week as against 386 cars in the preceding week, though lower than the 551 cars of the corresponding week a year ago.

The cumulative total of such car loadings of woodpulp and paper from the first week of this year until the week ending September 17 was 143,905 cars, compared with 157,053 cars a year ago in the similar period. The Eastern Division accounted for 125,665 cars this year compared with 137,712 cars a year ago and the Western Division for 18,240 cars this year as against 19,779 cars last year in the similar period.

SUPPLIERS . . . . .

Crane Packing Co., Chicago, is marketing a new chemically inert packing material, Chemlon, in molded form in a wide variety of shapes. "In the new molded form, Chemlon retains all of the chemically inert properties of the familiar braided packing," a Crane spokesman stated. "It is not attacked by acids or alkalis, and stands up for long periods of time under conditions never before successfully sealed by packing. It is effective to temperatures of 450° F." The molding process developed by the manufacturer results in high flexibility. This is helpful in installation of the packing rings. When split, they can be twisted and placed directly on the shaft without completely removing the gland. Chemlon's combination of low power factor and low dielectric constant makes it an excellent insulator for high frequency transmission lines. Among the molded forms now furnished are washers, bushings, rings, self sealing "V" cross-section rings, ring gaskets, and jacketed (French) gaskets. Numerous special shapes can also be molded for individual requirements.

Westinghouse Electric Corp., East Pittsburgh, Pa., will build a 1,250-hp., direct-current motor, one of the largest ever designed for a paper-forming machine, for delivery to the Enso-Gutzeit paper mill in Finland, R. H. Harris, sales manager of the Westinghouse Electric International Co., New York City, reports. It will provide the power for the various sections of the block-long, paper-forming machine by driving a lineshaft extending the length of the machine. Power is transmitted from this shaft to the various sections of the machine by belt and gear arrangements. The Enso-Gutzeit machine is capable of producing a continuous web of paper 192 inches wide at a speed of 1,500 feet per minute. The electrical equipment will include a 1,000 kw. synchronous motor-generator set for supplying power to the motor, complete control including a Rototrol rotating type of paper machine speed regulator, and other auxiliary equipment such as 250 horsepower "winder" drive. The order is valued at $143,000.

Warren Steam Pump Co., Inc., Warren, Mass., lists 17 mills among its customers in a newly published 12-page brochure, "A Company is Best Known by the Customers it Keeps." Pictured in the brochure are the following installations: Brunswick Pulp & Paper Co.; Weyerhaeuser Timber Co.; Southern Advance Bag & Paper Co.; Penobscot Chemical Fibre Co.; Pejebscot Paper Co.; West Virginia Pulp & Paper Co.; Florida Pulp & Paper Co.; S. D. Warren Co.; St. Regis Paper Co.; Hudson Pulp & Paper Co.; Tileston & Hollingsworth Co.; Gaylord Container Corp.; American Writing Paper Co.; and Gulf States Paper Co.

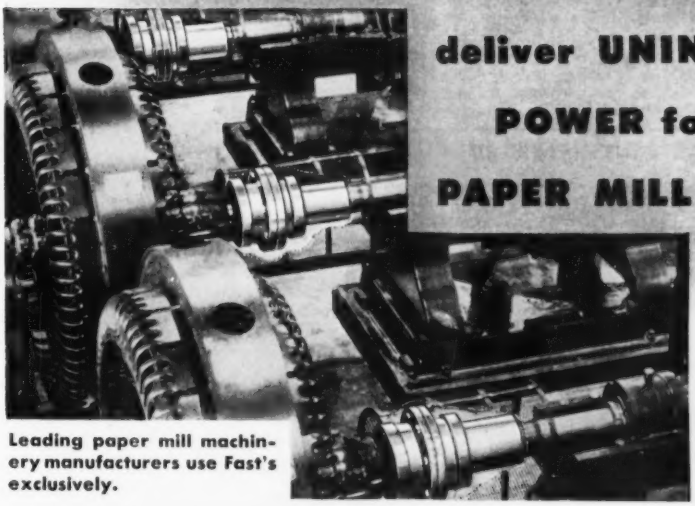
Foxboro Co., Foxboro, Mass., has added Robert B. Wolf, Jr., to its staff of instrument engineers at the home office, as assistant to W. S. Yunker, sales manager of the pulp and paper division. Mr. Wolf has been successively associated with the Crown-Willamette Paper Co., at Camas, Wash., Soundview Pulp Co., Everett, and Scott Paper Co., Chester, Pa. During the War years his work was with E. I. du Pont de Nemours & Co., at the Belle Works, in West Virginia. Most recently he has been a plant engineer at the San-Nap-Pak Mfg. Co., Mount Tom, Mass.

Trent Tube Co., East Troy, Wis., a subsidiary of the Crucible Steel Co., of America, has named Frederick Wenzel works manager and W. C. Christianson sales manager. Mr. Wenzel was plant superintendent of Trent prior to his appointment. He joined Trent in June, 1944. He formerly was associated with the Louis Allis Co. of Milwaukee as an electrical engineer. Mr. Christianson joined Trent in 1946 as assistant sales manager. He formerly was associated with Globe Steel Tubes Co., Milwaukee, as assistant to the sales vice-president.

Mark Osborne, president of the Osborne Paper Mill Equipment Corp., Fulton, N. Y., commenting on September 24 about the bankruptcy proceedings filed by the firm on September 20 said in part:

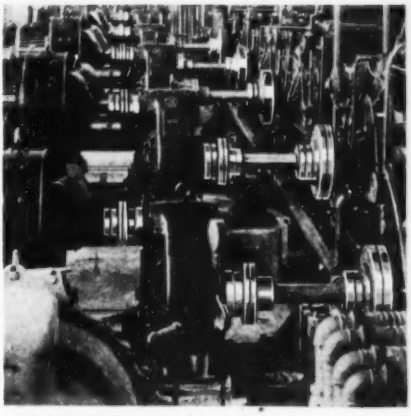
"The corporation financed its properties on a mortgage authorized by the Reconstruction Finance Corp., and serviced by the Citizens National Bank

Here's How FAST'S COUPLINGS deliver UNINTERRUPTED POWER for all your PAPER MILL EQUIPMENT



Leading paper mill machinery manufacturers use Fast's exclusively.

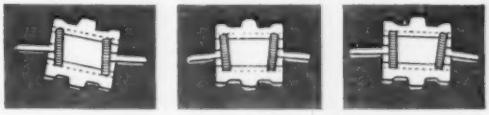
FOR JORDAN ADJUSTMENTS: Fast's Jordan-Type Couplings reduce wear on bearings, prolong life of motor and Jordan. Because Fast's splines are always meshed in oil, plug adjustment is smooth and certain. No worn spots can develop—customary "hard spot" is eliminated. Due to smooth torque and elimination of coupling vibration, Jordan life is increased and product discharged from Jordan is uniform.



AND FOR REMOTE DRIVES: Fast's Floating Shaft Couplings enable drives to be *set back* from paper machines without the use of supporting bearings. This eliminates additional bearings, does away with impossible task of keeping three or more bearings in line. It saves you installation cost, upkeep and bearing replacement. These Couplings have been in service since 1926!

NO MATTER what your mill coupling problem may be, there's a Fast's made to solve it and give you longer machine life, lower upkeep costs and minimum shutdown losses. For absolute dependability, specify these original gear-type couplings with *exclusive* "rocking bearing." The *only* coupling which provides a *positive* metal-to-metal seal that keeps moisture, dust and grit *on the outside!*

This exclusive "rocking bearing" is also *correctly engineered* to allow freedom of movement to compensate for misalignment because *spherical* base has *same axis* as the hub spline faces. And Fast's Couplings give you the benefits of years of top engineering experience and unexcelled service, including available parts if required by change of drive, *even if your Fast's have been running for 30 years.* Get full information—check the coupon and mail today to: Koppers Co., Inc., Fast's Coupling Dept., 230 Scott Street, Baltimore 3, Md.



Compensate for All Misalignment

The floating sleeve takes a neutral position. All forms of misalignment are compensated for between the lubricated faces of the splines, equally divided between driving and driven members. The entire assembly revolves as one unit. The above exaggerated diagrams demonstrate Fast's principle.

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Please send me your illustrated, informative catalog, giving full information on the many types of Fast's Couplings.

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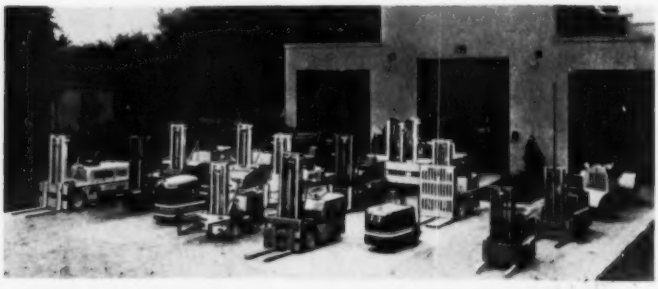
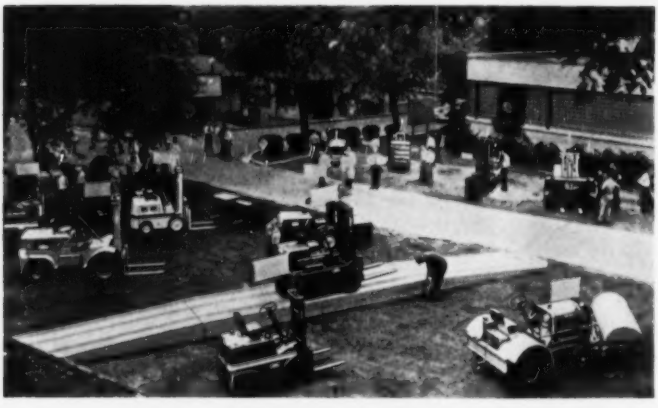
& Trust Co. of Fulton, which bank had a small participation in the mortgage. When our local bank was asked to defer a principal payment of $3,000.00, the bank agreebly consented. . . . The refusal of out-of-town trade creditors to defer payments to them made it necessary to protect the affairs of the corporation for the benefit of all concerned, and for that reason the corporation, found it desirable to file under Chapter 10 of the Bankruptcy Laws, upon the advice of its attorneys, that this solvent corporation with assets of over $500,000 could defer paying creditors for a long enough period to reduce inventory and collect receivables due it that have slowed up in this period of business recession, that the corporation might again operate in a normal manner under improved business conditions under the protection of the Federal Court until the conditions that caused the situation could be corrected and improved.

"The Osborne Paper Mill Equipment Corp. will continue to operate. The current week's payroll of its employees was promptly met and business is being carried on as usual and will be for the necessary period to readjust the affairs of the corporation . . ."

DIRECTORS SEE EQUIPMENT DEMONSTRATED





Directors of the Clark Equipment Co., recently assembled at Buchanan, Mich., for the regular quarterly meeting, witnessed a demonstration of the company's latest developments in its materials handling equipment. . . This special showing, first of its kind, was under the supervision of L. A. Bixby, vice-president in charge of engineering. . . As it was impractical to demonstrate the entire Clark line the "live" exhibit was limited to basic models of gas-powered and electric battery-powered fork-lift trucks, industrial towing tractors, Tructractors and a variety of special fork-lift truck attachments. Certain of the fork-lift trucks were equipped with the new Dynatork Drive.

General Electric Co's., manager of paper and textile divisions of industrial engineering, G. W. Knapp, addressed the Hudson River Mill Technical Ass'n., at The Woods, Lake Luzerne, N. Y., on September 20. Mr. Knapp was introduced by M. W. Wells, chairman of education. W. F. Curis presided and L. A. Lehnert was in charge of dinner arrangements. Guests included Dr. K. A. Taylor, director of research for the International Paper Co., other members of his staff, and Industrial Bureau representatives.

Link-Belt Co. opened new manufacturing plant on a ten-acre plot at 3203 South Wayside, Houston, Texas, on September 27. Allan Craig, formerly located at the Link-Belt plant in Atlanta, is general manager of the company's Southwestern Division, with headquarters at the new Houston plant.

Harris-Seybold Co., Cleveland, has named John M. Morehouse central branch manager succeeding the late A. T. Walker. He will be responsible for Harris-Seybold sales in Ohio, Michigan, West Virginia, Kentucky, eastern Indiana and western Pennsylvania.

Flexible Steel Lacing Co., Chicago, has named Fred O. Benson sales representative for Illinois. He takes over most of the territory formerly covered by Sam Baker who retired last year after serving the company for 31 years.

Hooker Electrochemical Co., Niagara Falls, N. Y., has promoted David M. Coleman to the sales development department to handle technical correspondence for all Hooker chemicals. He joined the firm in 1943.

Farrel-Birmingham, Ansonia, Conn., has named David Neill as Cincinnati sales representative for gears, gear units and flexible couplings manufactured in the company's Buffalo plant.

Harry A. Porter, vice-president in charge of sales of the Harris-Seybold Co., Cleveland, has been named president of the Direct Mail Advertising Assn. for the coming year.

American Cyanamid Co., New York, has named Dr. L. P. Moore manager of its new products development department and Dr. E. W. Cook European technical representative.

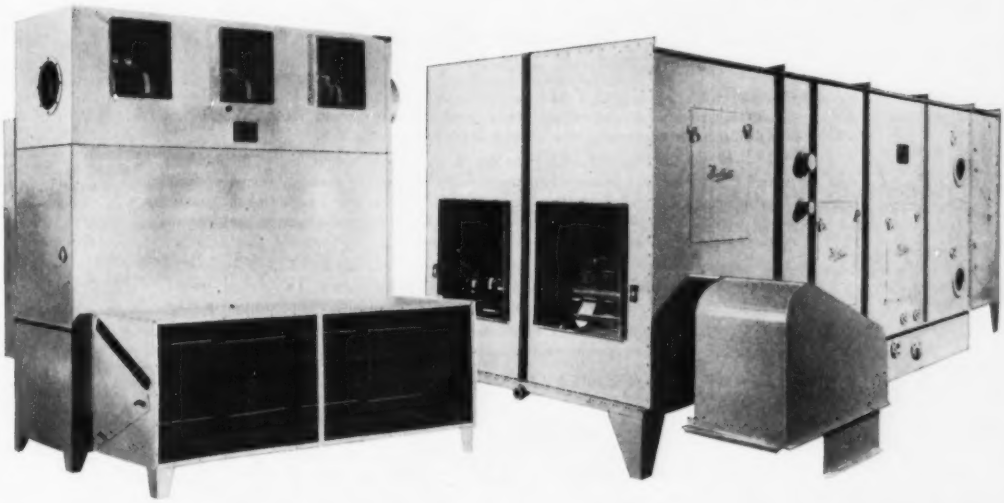
Not AN "IMPOSSIBILITY" FOR YOUR PLANT— BUT AN IMPORTANT PROMOTION AID!

LOW-COST, SIMPLIFIED AIR CONDITIONING BY "BUFFALO"

More and more modern plants ARE using "Buffalo" air conditioning, not on starry-eyed speculation, but for good, hard-headed business reasons!

First, these "Buffalo" Units are CONTROLLING plant climate—providing clean, properly humidified air at the right temperature constantly. Outside, let it snow, blow, rain or become hot or "muggy"—it's always comfortable inside. Workers do a better job faster, absenteeism from sickness declines. And product quality is held to a uniform, high standard with the help of this clean, tempered air that's always exactly controlled.

Secondly, "Buffalo" units are developed to the point where installation and servicing are SIMPLE and relatively inexpensive. The VPC Cabinet, upper left, for example, comes in three basic interchangeable sections—can be moved in through standard plant doorways—takes very little space—and still provides COMPLETE comfort conditioning in several sizes, up to 22,000 cfm. The "Buffalo" PCGW Cabinet, upper right, thoroughly WASHES and filters your air and provides temperature control in a remarkably compact, easily serviced unit. INVESTIGATE the benefits of "Buffalo" Air Conditioning in your plant—it will pay for itself quickly in higher production!



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Methocel has an inherent ability to dry to a smooth, tough, clear, flexible film which binds clay and other pigments to paper and paper board. This exceptional film forming property is shown by Methocel's high sizing power to oils, greases and waxes. Light solutions of Methocel produce marked resistance to the penetration of gloss inks, varnishes, solvents and waxes.

Other useful qualities of Methocel to the paper producer are its efficient suspending power, highly useful in suspending pigment in colors; great thickening ability, valuable in control of latex viscosity; and excellent emulsion stabilizing properties.

Try Methocel as a better way of producing better paper products. Send in the coupon for your *free* experimental sample of the *new* Methocel, *powdered*.

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Please send free sample of METHOCEL, for use in _____

Check viscosity desired: 15, 25, 100, 400, 1500, 4000 cps.

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CHEMICALS INDISPENSABLE
TO INDUSTRY AND AGRICULTURE

Number Eight Newsprint Machine at Powell River

By

F. R. RILEY
General Superintendent of Paper Mills

H. B. URQUHART
Assistant to Resident Manager,

Powell River Company, Ltd., Powell River, B. C., Canada

Abstract

It is the purpose of this paper to describe the flow sequence and control equipment used on # 8 paper machine at Powell River, and to outline the experience on this machine to date; also to indicate where design benefits were realized and where difficulties were encountered.

The first step covers flow and control equipment for the machine and, to prevent undue complication, a division has been made for different circuits: (1) The stock flow before the head box circuit; (2) The actual head box circuit itself; (3) The broke circuit; (4) The white water circuit.

(1) The Stock Flow Before the Head Box Circuit
(Figure 1)

Sulphite from the main source of supply is delivered to the sulphite tank through an automatic valve actuated by a liquid level controller on the tank. The sulphite is pumped up to the meter box which is equipped with an overflow to maintain constant head. The flow through the meter box is shown diagrammatically, with dilution water entering ahead of the small agitator and the agitated and mixed pulp passing through the consistency regulator and finally through the meter proper. The sulphite discharges from the meter into the white water line ahead of the filter head box to insure mixing of the white water and sulphite before going over the filter where fibre in the white water is reclaimed, (using the sulphite as a filter aid) and then discharges into the mixed stock tank. The sulphite can by-pass the filter should it break down.

The groundwood tank has not yet been equipped with an automatic valve and liquid level controller, because of the physical set up of the groundwood storage, but this will eventually be done. The groundwood is pumped up to a meter box similar to the sulphite and discharges to the mixed stock tank. The groundwood meter is driven by a "Speed Ranger" and the sulphite meter is connected to the groundwood meter by a Reeves drive, which allows the desired percentage sulphite to be maintained. The "Speed Ranger" is set by a liquid level controller on the mixed stock tank. The mixed stock (which contains a metered amount of broke) is pumped up to another meter box, equipped with an agitator, consistency regulator and meter similar to those used on groundwood and sulphite. The mixed stock meter speed is controlled by inching buttons located on the machine tender's panel board. The mixed stock can be made to by-pass the jordan if desired.

A brief description of the standard meter box follows:

The stock enters the meter box at the bottom and any excess flows back to the tank over a baffle. The dilution-water nozzle is directed at a hole in the second baffle and the agitator on the downstream side of this hole further mixes the stock and dilution water. The agitated and diluted stock flows over another baffle into the consistency regulator compartment, and thence underneath a baffle into the stock meter, from which the metered stock flows out through the bottom of the box. It has been found that consistency regulator element is adversely affected by changes. It has not yet become essential to improve the functioning of the consistency regulator, since the stock is quite well controlled as it reaches the regulator.

(2) Head Box Circuit
(Figure 2)

The head box circuit is shown in *Figure 11*. The dilute stock in the mixing tank is pumped up to the Bird screen feed flume by the primary fan pump, the speed of which is controlled by the main paper machine drive. The proper speed range as dependent on consistency and slice opening is established by inching buttons which operate a rheostat in the field of the D.C. motor driving the pump, an attempt being made to set the 8" by-pass valve into a control operating position. The amount delivered to the screens under automatic function is controlled by the liquid level controller located in the Bird screen discharge flume which sets the 8" valve. The stock from the Bird screens is pumped by the secondary fan pump to the head box itself. The secondary fan pump, like the primary, is linked with the main machine drive, and for automatic operation is tied to the headbox effective head.

The "effective head" is that which creates the discharge velocity through the slice. It is indicated by a water column connected to the head box and open to the atmoshere, and measured by a bubble pipe which is connected to the head box liquid level controller which in turn operates the 8" secondary by-pass valve.

Since the head box is operated under a vacuum, the level of stock in the head box is considerably higher than the level in the water column. In order to

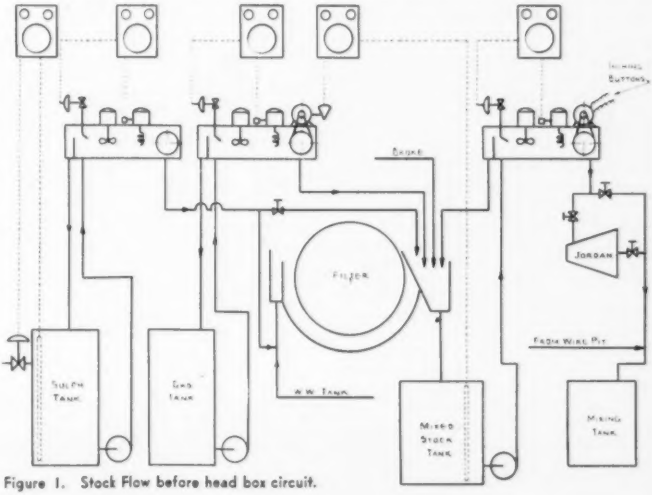


Figure 1. Stock Flow before head box circuit.

Presented at the 1949 Joint Spring Convention of the Pacific Coast Branch Technical Section, Canadian Pulp and Paper Ass'n., and Pacific Coast Division, The American Pulp and Paper Mill Supt., Ass'n., Inc.

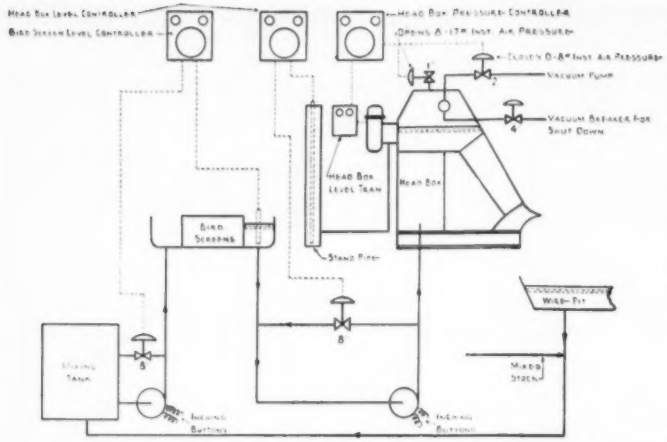


Figure 2. Head box flow circuit.

maintain equilibrium, this level is held by a displacement type level controller which operates two split ranged valves, their purpose being to create the required vacuum in the dome.

The above controls were found inadequate to handle the hydraulic surge developed in the Bird screen—head box—slice during rapid shut downs so a 4" vacuum breaker valve was installed for this purpose.

The wire pit and the mixing tank are openly connected and are side by side. It was originally intended to have the mixed stock and white water intimately mixed in the agitated mixing tank, but consistency variations experienced in the startup period were found to decrease when the stock was fed into the wire pit, and a revision was made whereby the stock is introduced into the duct connecting the wire pit and the mixing tank.

(3) Broke Circuit
(Figure 3)

The machine is equipped with an independent broke circuit which consists and a main broke tank. The couch broke and couch strip drop into the couch broke tank. The level in the of a broke beater, a couch broke tank couch broke tank is held by means of a by-pass valve around the pump which takes it to the main broke tank.

Press broke and dry broke enter the broke beater which is of the automatic discharge type, the gate in the discharge being controlled by a level controller, which maintains level in the beater. The beaten stock is dropped into a head box where the level is controlled by means of a by-pass valve operated by changes of level and thus the discharge to the broke tank depends on the quantity of broke being handled.

The main broke tank has a liquid level controller which is set for a broad range and when the level in the broke tank exceeds the present level a spill pump is automatically started. This spill pump sends broke back to the groundwood system. (The spill pump is not shown on the drawing.) When the broke entering the main broke tank does not exceed the normal rate it is pumped through the broke jordan up to the broke meter box. The level in the broke meter box is maintained by a liquid level controller and a by-pass valve. The broke is agitated, its consistency adjusted and finally metered. The speed of the meter is set so that the maximum delivery of broke will not exceed approximately 15% of the machine furnish.

(4) White Water Circuit
(Figure 4)

The white water tank receives stock and water from two sources, the wire pit overflow, and the accepted stock from Bird screen tailings which are handled by a flat screen. The outgoing white water is used in two ways—as dilution water for the broke beater, as dilution water for the consistency regulators on groundwood, mixed stock and broke. The remaining white water goes to the filter for fibre reclamation. The white water pump is equipped with a pressure controller, and by-pass valve, for the purpose of maintaining constant pressure in the white water supply to the consistency regulators. In order that the best fibre reclamation may be obtained the speed of the filter is adjusted by the white water tank liquid level controller to follow the quantity of white water available whilst the level in the filter is maintained constant by its own controller.

The Head Box

The head box was designed on the principle that the statistical variation in the flow distribution is reduced when stock is accelerated. Flow can be held streamlined by keeping the stock continually under acceleration in the final approach section.

The problem was to get the stock to the approach section without cross currents and with little energy left in it. This was accomplished by using an opposed flow distributor to get approximately uniform across-the-machine distribution; and then by using two perforated rolls as energy absorbers to reduce the velocity of the stock as it is delivered to the hump.

The head box had to be capable of a wide speed range without loss of flow control. To do this, the dimensions of the hydraulic flow channel were kept the same for all speeds. Since the level of the stock surface above the slice is fixed for this reason, variation in effective head must be obtained by variation of pressure in the dome.

To assist with the problem of removal of air from the stock, the design figures

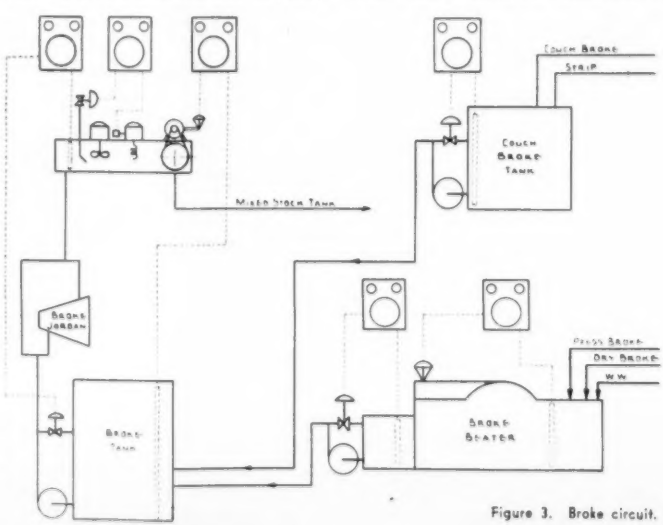


Figure 3. Broke circuit.

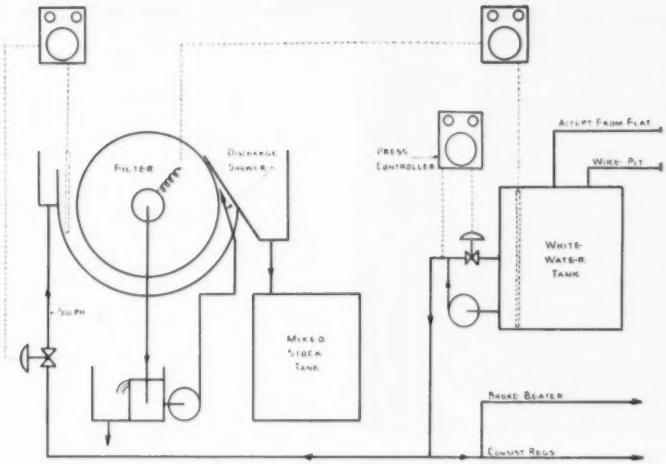


Figure 4. White water circuit.

were chosen such, that for speeds up to 1800 fpm the free surface (the dome) is under lower than atmospheric pressure. Pictures taken with a high speed flash camera do not show any air in the slice discharge.

14 long rectifiers are fastened to the bottom plate on the slice side. Their leading and trailing edges are designed to make small angles to the direction of flow to prevent stock accumulation. Corrugated construction was used throughout to obtain stiffness with reduced weight. The box is lined with neoprene up to and slightly past the hump. Stainless clad is used from there on and the front pond plate is all stainless clad.

Because of expected difficulty in cleaning the narrow sections the dome and front pont plate were designed so it was capable of being dismantled in 30 minutes. Adjustment of the slice is made by springing the top lip and the spase between adjustments is approximately 4".

Fourdrinier

There are no outstanding changes on the Fourdrinier section of the machine except that it is more rugged than the usual design for the expected high speed service. The Fourdrinier is, of course, removable. The Fourdrinier has the breast roll, a forming board, a grooved roll, a plain roll, a grooved roll and the remaining 14 rolls are plain. There are 9 box type baffles located between the wet end table rolls, with curved sides to prevent splash, and with a micarta top. The 8 suction boxes have end grain maple covers and the suction box evacuation system is the usual Broughton type. No dandy is being operated on the machine at present. The suction couch is 44" in diameter with a double suction box with a 13" vacuum space on the first box and 7" vacuum space on the second, and there are 3 Nash H-12 pumps, one on the first box and two on the second box. The wire guide is a water jet type developed in our own organization. Provision has been made for the installation of automatic tension control equipment for the wire.

Press Section

There are two suction presses. The bottom rolls on each press are rubber-covered whilst the top rolls are red granite. Pneumatic loading equipment is used on both presses. It is likely that a soft rubber top roll on the second press will be used as recent experience on other machines in the mill with soft rubber top rolls indicates an expected improvement in felt life and an increase in the dryness of the sheet entering the dryers.

Dryer Section

There are 53 dryers in the main dryer bank, one of which is a 48" baby dryer. The two dry end shells can be used as sweat dryers; but only one of these is in such use at present. There are 10 felt dryers (felt driven) 6 on the top and 4 on the bottom. 7 dryers are used as secondary dryers. The dryer bank is divided into 4 top and 4 bottom sections and there are 7 dryers felts, the bottom wet end section running with a felt. The four dry end felts are asbestos and the remainder are cotton. The dryers are driven with helical enclosed gearing. 3/8" diameter ropes are used to convey the tail through the dryers.

The Dominion Cram condensate system is used for condensate evacuation.

The hood is made of aluminum and

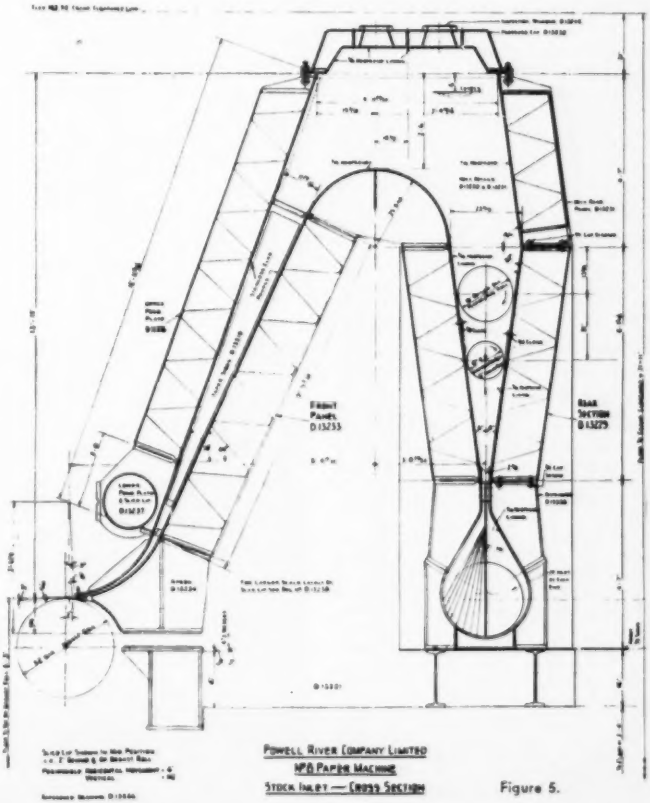


Figure 5.

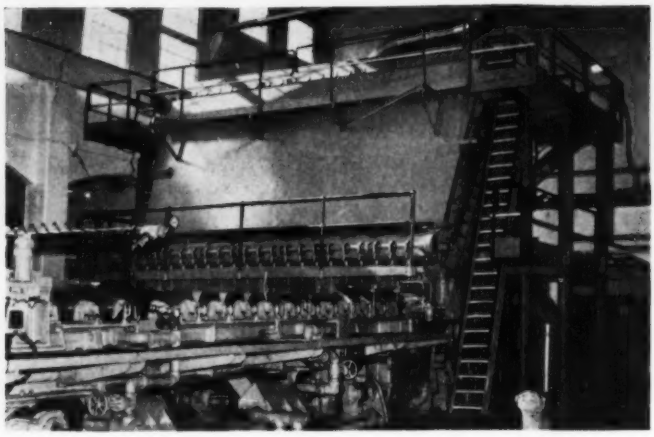


Figure 6. New design of head box on Powell River Company's Number eight Newsprint Machine.

insulated. The top is hollow and the flow of exhaust air into the enclosure is controlled by adjustable longitudinal dampers running the full length of the machine on both back and front sides.

The basement felt pit is completely enclosed.

The Calendar Stack

The calendar stack consists of a 32" bottom roll, 2—20" intermediate rolls, 5—16" rolls. The rolls are bored and have inserted journals eqiupped with anti-friction bearings. There are two steam rolls but only one is heated at present. An interesting feature on the calendar stack is that the back tender can adjust the dry end air on the calendar stack from a series of relay valves spaced along the pope reel.

The Drive

The machine is equipped with a Harland drive which operates satisfactorily. A paper on this drive has already been read at a Technical Convention by Mr. Spencer Phillips.

The tension control between the reel and the stack is new to Powell River and our operators have had difficulty getting used to it. Increased experience and a change in the sensitivity of the control have improved operations and continued improvement may be expected.

An M.G. set supplies controlled voltage for the armatures of the D.C. motors of the drive. A back pressure turbine can be connected to the M.G. set through a gear reducer so power can be extracted from the steam to drive the D.C. generator and also run the synchronous motor as an A.C. generator supplying power to the incoming feeder. The synchronous motor drive has been used up to the present, except for what might be termed test operation of the turbine. When it is needed, the turbine can be connected into the system in about 20 minutes.

Ventilation System

The hood exhaust is passed through four fresh air stainless steel economizer units which are preheating units for the machine room air, and the felt pit air. The air going to the roof and the felt pit air can be further heated by steam coils.

The exhaust fans have integral vane type damper louvres. This allows control of the exhaust air quantity so, in conjunction with the longitudinal hood dampers, any desired exhaust condition can be realized.

A Ross Crewin system has been installed to blow jets of high velocity hot air into the dryer pockets. The air for this system is taken off the heated air supply to the felt pit and is further heated to a suitable, controlled temperature in heating coils. The amount of air to the system can be adjusted by a damper located on the fan discharge.

All Harland drive motors are force ventilated with filtered air, the temperature of which can be set, by recirculation, to any desired temperature above the outside air temperature.

Machine Operation

The start up of a new machine is usually accompanied by numerous problems and number eight machine was no exception.

Schedules were arranged to have the winder in running condition before machine start up. Experience was obtained by use of reels from #7 machine, and there was time to install a locally made stroboscope which gave necessary visual representation of the speed relation between the two winder drums.

Minor mechanical difficulties and adjustment difficulties were encountered in the machine start up.

A point of interest in the start up period was the communication system. An amplifier was built for the purpose, and earphone - microphone sets were strategically located in the machine basement near various electrical equipment, up on the meter gallery, on top of the stock inlet, at the stock preparation panel and at the machine tender's panel. This enabled information of faults to be relayed immediately to all concerned and major difficulties were avoided.

The machine was declared officially in operation on September 16, 1948. Table I shows the machine speed, gross production and percent efficiency up to the week ending May 1st, 1949.

The head box consistency during the start up period was around .4% and as this consistency was increased the machine started to break down from lumps which showed up at the couch and presses. This reached a point where the lumps were causing up to 100 breaks per day. Taking the consistency back down to the previous range had no appreciable effect.

The lumps were unlike anything our operators had seen before. They were

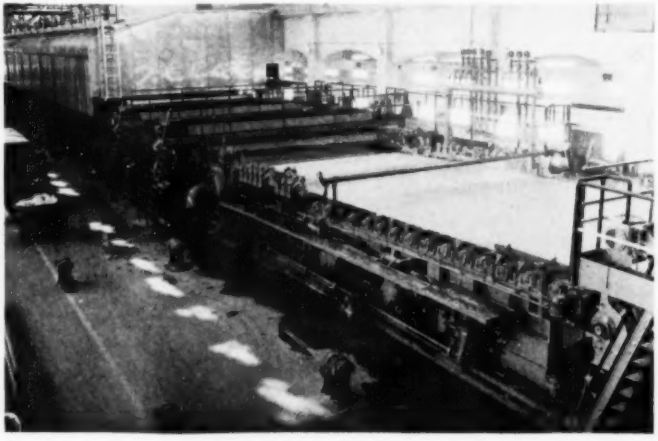


Figure 7. Number eight Machine from the wet end. Note reflection from aluminum hood.

characteristic in appearance and consisted of groundwood and sulphite long fibres set down in side by side formation. The width and thickness were characteristic (roughly 5/16″ wide and up to ⅛″ in thickness) and specimens were obtained up to 2½″ in length. The lump breaks are reflected in the low efficiencies in the table up to the period ending on Oct. 24th.

It was obvious that the source had to be in the circuit after the Bird Screens. A systematic check was made. Pipe joints were all smoothed up and all possible obstructions eliminated.

The stock inlet perforated rolls were speeded up, direction of rotation reversed and taken out completely without stopping the lumps. It was noticed that the length of the lumps increased with the rolls out.

The only possible place left for lumps to form was the secondary fan pump. The stock was strained out of the system and lumps were caught. On examination, the runner blades at the eye were at right angles to the flow and about the width of the lumps. The blades were cut to make a small angle with the flow and the edges tapered off. On starting the machine it ran 35 hours without a wet end break and the speed had been run up to 1500 fpm.

Table I

Week Ending	Speed	Gross Production per day	% Efficiency
Sept. 19/48	1270	124.0	72.1
26	1330	130.9	72.6
Oct. 3	1271	124.4	73.5
10	1284	100.6	65.4
17	1309	117.1	66.1
24	1365	159.1	85.9
31	1462	171.5	86.7
Nov. 7	1512	166.3	81.2
14	1487	164.1	82.1
21	1479	157.1	78.8
28	1469	159.4	80.5
Dec. 5	1418	151.9	79.6
12	1436	168.6	87.9
19	1467	171.5	87.3
26	1463	178.1	89.5
Jan. 2/49	1457	181.8	93.9
9	1477	183.7	92.3
16	1462	182.1	92.2
23	1447	178.1	91.6
30	1447	170.9	87.6
Feb. 6	1464	186.7	94.7
13	1489	181.2	90.1
20	1513	183.8	90.1
27	1500	184.9	91.0
Mar. 6	1492	180.1	89.1
13	1500	190.1	94.0
20	1492	181.4	90.1
27	1486	178.8	89.3
April 3	1488	189.9	94.5
10	1501	188.5	92.5
17	1489	184.2	91.9
24	1467	187.4	96.0
May 1	1483	181.2	90.6

Record day—April 23rd, 1949—200.5 tons.

By the week ending Nov. 21st. wet end breaks caused by a brown material were causing serious production losses. The material looked like slime but gave indication of being a pitch emulsion (after cursory analysis using various solvents). Again a systematic investigation was carried out. In this case the source appeared to have been an open port in the double wall of the head box dome, although other things done at the same time may have had some bearing on elimination of the brown material.

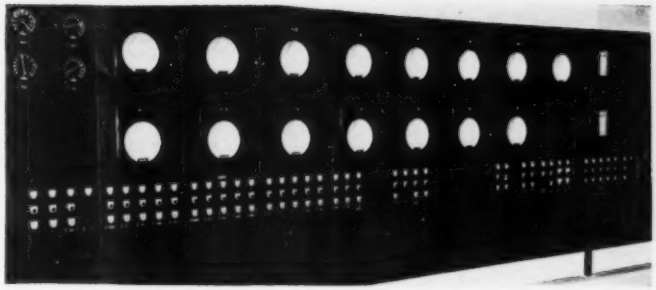


Figure 7. One of the new Number eight machine control panels.

These two sources of trouble were the major causes of reduced efficiency and production since the machine was started; and further, they caused delays to the correction of other minor mechanical difficulties and hampered adjustments which were necessary for the efficient operation of the machine.

The machine is running well at present with the efficiency gradually improving.

The white water system and the attendant fibre reclamation is satisfactory.

The broke system and its attendant controls work well.

The Powell River stock inlet proved satisfactory in all of its fundamental concepts. It has operated up to 1550 fpm with good results. We expect to get still better results after further modifications in the details. In the original design, provision was made for short rectifiers close to the slice lip but these were not put in because it was hoped that they would prove unnecessary. However the small rectifiers have been installed and an improvement in sheet control resulted. The two edges (7″ to 10″ in width) are still difficult to control. Sheet formation is considered good for an undandied sheet.

The fourdrinier has operated well. Wire life on #8 has been better than number seven (using only normal life wires on each machine). Number eight has a 12-day life and number seven a ten-day life. Number seven runs 30 to 40 fpm slower than number eight. The reason for the improved life seems to be the use of box type baffles between rolls at the wet end. The micarta top supports the wire and prevents some of the sharp flexing that ocurs when table rolls extract large quantities of water. Since number eight has larger table rolls than number seven. (14″ vs. 10″) it would be expected that number eight would have a shorter wire life than number seven.

The Dominion Cram condensate removal system was also installed on number seven where the running load was greatly reduced but the accelerating load was greatly increased. The same results were obtained on number eight. This accelerating load is being reduced by setting the Cram tips closer to the dryer shell.

A temperature controller for the dryer steam was installed on number eight with the reference bulb in one dryer. This is an accepted installation but under our particular conditions it caused some trouble.

The steam supply varies in superheat content and so the relationship between the steam temperature and the heat taken up by the moist paper also varies. This explains why for the same temperature setting the back tender can get varying results on the reel.

If there is an appreciable condensate film in the dryer, the shell cannot get hotter than the condensate temperature under the existing pressure conditions. With the superheat varying, pressure control was used to replace the temperature control until the temperature control is made satisfactory.

The temperature element was left in the dryer and is at present recording.

Additional superheating capacity is being added and with both pressure and temperature equipment on hand a study can be made that will indicate the most satisfactory method for our conditions.

Allyl Starch Pilot Production

Allyl starch, introduced to industry in 1947, is now available in semi-commercial quantities. General Mills has expanded pilot plant manufacture of the product and is now offering 55-gallon drums of allyl starch in lacquer solvent, technical ethanol or toluene-isobutanol. Climaxing an intensive development and field evaluation program, the company is, for the first time, making available a specially-compounded, allyl starch baking formulation that is highly water and heat resistant.

As a baked lacquer or enamel, this new formulation has produced hard, tough and flexible as well as water-resistant films. Dr. J. Robert Roach and Robert Nordgren, General Mills' chemists responsible for the laboratory development of allyl starch, report that panels coated with the product have remained under water three weeks

without damage. Normally, the compound will bake to a hard, durable, solvent resistant coating in 90 minutes at 110°C. or 45 minutes at 125°C., but its baking time may be shortened to one or two minutes at higher temperatures.

Since its introduction, allyl starch has found a place in such industrial products as printing inks, specialty adhesives, overprint varnishes and heat-resistant oven finishes. The heat-resistance of allyl starch has created interest in the product for finishes on automobile exhausts, automobile and diesel engines, steam radiators, oil refinery equipment, and metal smoke stacks. Application tests have shown its value in linoleum, shellac substitutes and in oil and solvent-resistant surface coatings for furniture, home appliances and other metal and wood surfaces.

Aniline inks made with allyl starch, for example, have dried rapidly and have shown high gloss. On glassine or cellophane, they have produced sharp, opaque impressions with bright, uniform surfaces.

As an overprint varnish, allyl starch, which dries quickly, has formed hard, glossy films. Because these films are resistant to solvents, acids, soap and water, they have been used successfully as a coating for beer cans.

In linoleum, where it serves as a binder with linseed oil, allyl starch has shown a combination of valuable properties. Because it cures rapidly, it speeds production, and it gives linoleum an extremely smooth finish with improved alkali resistance.

Since high-solids content solutions of allyl starch in technical alcohol are now used commercially for bonding oily or greasy surfaces, the product also shows promise as a labeling adhesive for cans or jars containing greasy materials, as a glue for butter and margarine packages and as a binder for duplicating stencils and backing sheets.

In coatings, for industrial and marine equipment, allyl starch compositions containing pigment or metal, such as aluminum powder, have produced exceptionally hard films with high lustre and excellent resistance to solvents and high temperatures. Allyl starch coatings have remained on the inside of high-temperature baking ovens for more than 90 days without showing signs of deteriorating, yellowing, or blistering. Other allyl starch coatings have survived long periods in standard salt cabinets, where they were exposed to continuous and intermittent sprays of 20 percent sodium chloride.

Lacquer formulations of allyl starch are of particular interest as coatings for furniture and similar wooden surfaces primarily because they produce films which dry rapidly and which may be sanded soon after application. At room temperature, these films become tack-free to foil in 2 hours and mar resistant within 24 hours. They develop excellent solvent resistance in a few days. At a temperature of 75°C., they cure sufficiently for most applications within 30 minutes. On metal, they will cure within one minute at 200°C.

After drying overnight, lacquer-type allyl starch coatings prepared by General Mills have shown high resistance to acetone and similar lacquer solvents.

Allyl starch itself, which was originally developed by the Eastern Regional Research Laboratory of the U.S. Department of Agriculture, is an unsaturated starch ether containing approximately 1.7 allyl groups per glucose unit. It is soluble in alcohols, ketones, esters, halogenated hydrocarbons, nitroparaffins, ethers, toluene, Hi-flash aromatic naphthas, and in other aromatic hydrocarbons when a small amount of a hydrogen bond-forming solvent is present. Allyl starch is normally insoluble in aliphatic hydrocarbons; however, these hydrocarbons may be used as a dilute when the mixture contains a small percentage of high boiling active solvent.

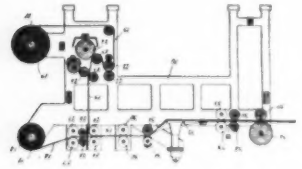
In announcing General Mills' expanded pilot plant manufacture of the product, it was stated that the additional product now available will be distributed as equitably as possible among firms who are evaluating the material in their own products and pilot plant production will be stepped up to keep pace with growing demand.

Patent Abstracts

● ***In addition to abstracts on the technology of pulp, paper and related industries, miscellaneous abstracts which may provide useful information to our readers are included herein.***

2,466,823—Paper Web Tube Severing Machine. George W. Poppe, Brooklyn, N. Y., assignor to Equitable Paper Bag Co., Inc., Long Island City, N. Y. Filed October 11, 1946 — Issued April 12, 1949.

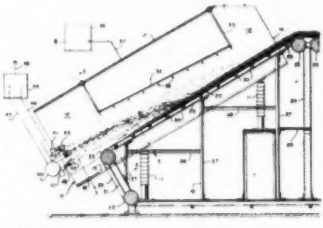
A machine including the combination of a feeder for continuously pushing a traveling web of flexible material from it, a speed-up device spaced from said feeder for gripping said material fed therefrom and intermittently forcing the gripped portion thereof to a higher traveling speed than is imparted by said feeder, a slow-down device between said feeder and said speed-up device for gripping said material and intermittently forcing the gripped portion thereof to a slower traveling speed than is imparted by said feeder, whereby said material is intermittently tensioned to sever a length of said material from the remainder and whereby an excess of said material intermittently collects between said feeder and said slow-down device in synchronism with the latter's operation and said tension is isolated from said feeder by said excess of said material, and including a system for variably fixing the material feeding speed of said feeder independently of a frequency of the described intermittent operations of said devices whereby to vary the length of the severed material.



2,466,906 — Method and Apparatus for Forming Fibrous Webs. Emery P. Miller, Williams Creek, Ind., assignor, by mesne assignments, to Ransburg Electro-Coating Corp., Indianapolis, Ind. Filed November 23, 1946 — Issued April 12, 1949.

In the method of manufacturing matting, the improvement which consists of electrostatically mixing fibrous particles and binding particles and thereafter subjecting said mixed particles to an electrostatic field for forming said particles into a matting.

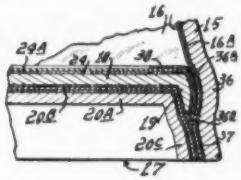
Apparatus for manufacturing matting comprising a collecting electrode, a depositing electrode spaced from said collecting electrode, a high voltage source electrically connected to said electrodes for creating an electrostatic field therebetween, means for electrostatically mixing particles of two different ingredients for a matting, means for imparting sufficient energy to said particles for moving them, after their mixture, into said electrostatic field, and means for collecting the mixed particles in said field in the form of a mat.



2,467,016 — Fibrous Container for Oil and Other Liquids. Charles K. Dunlap, Hartsville, S. C., assignor to Sonoco Products Company, a corporation of South Carolina. Filed February 16, 1944—Issued April 12, 1949.

A paper container adapted to hold oil without leakage, the same comprising a frustro-conical body tube lined interiorly with an oil-proofing material of the character of glassine paper, and a unitary base-end closure for the body tube lined throughout its extent interiorly of the container, said end closure unit comprising a top inverted cupped disk having an annular flange of minimum height and a bottom inverted cupped disk having an annular flange of greater height fitted within and secured to said top disk by an oil-proof adhesive, the flanges of said closure unit being shaped to the frusto-conical form of said body tube and having an oil-proof adhesive of the character of neoprene applied circum-

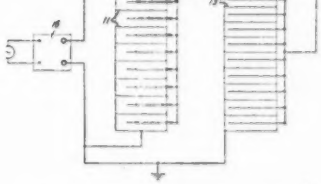
ferentially thereto, whereby said closure unit may be assembled with said body tube under the influence of heat and internal annular pressure



applied against external annular resistance and thereby reform the body tube with an annular bulge forming a retentive seat for the flange portion of the top disk of said closure unit.

2,467,068 — Electrical Precipitation. Harry A. Wintermute, Plainfield, N. J., assignor to Research Corporation, New York, N. Y. Filed August 30, 1945—Issued April 12, 1949.

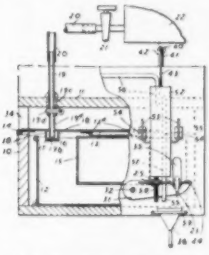
An electrical precipitator including a charging stage comprising opposed discharge and non-discharge electrode systems and a collecting stage including opposed precipitating and non-discharge collecting electrode systems, and stages being arranged for flow of a stream of gas to be cleaned successively through said charging stage and said collecting stage, means electrically



connecting the non-discharge electrode system of the charging stage and the non-discharge collecting electrode system of the collecting stage to one terminal of a high potential current source, means electrically connecting the discharge electrode system of the charging stage to the other terminal of the high potential current source, and means including an air gap positioned externally of the gas stream flowing through said charging stage and said collecting stage for transferring charges from said other terminal to the precipitating electrode system of the collecting stage.

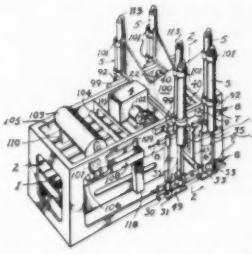
2,467,109 — Chlorinator. Norman Mindham Bell, Northampton, and Wilfrid Charles Childs, Staverton, Daventry, England. Filed May 9, 1944 — Issued April 12, 1949.

Apparatus for feeding chlorinating solution to a water supply comprising a main supply vessel, a cabinet positioned conveniently near to said vessel, a control vessel in said cabinet, a flow tube for the chlorinating solution leading from said supply vessel through said cabinet to said control vessel, a float-operated closure in said control vessel for said flow tube, said closure being responsive to changes in the solution level in said control vessel, a syphon drip tube leading from said control vessel, a pivoted lever mounted on said cabinet, a loading device acting on said lever, a vessel suspended from said lever, a water feed to said suspended vessel leading from the water supply to which the chlorinating solution is to be fed, said suspended vessel having a leak hole in the lower part thereof, and an arm connecting said suspended vessel and said syphon drip tube, said suspended vessel being adapted on filling to overbalance said pivoted lever against the action of said loading device and thereby to lower said syphon drip tube until the water flow has ceased, and the suspended vessel has emptied itself, through said leak-hole, whereupon said loading device reasserts itself and restores the parts to their original positions.



2,467,128—Automatic Multiple Color Printing Plate and Inking Means. William H. Hancock, Los Angeles, Calif. Filed November 13, 1945—Issued April 12, 1949.

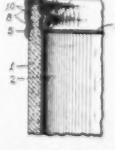
A multiple color printing plate comprising a movable type base, comprised of a plurality of parallel movable strips providing means to mount



a plurality of printing elements, which said parallel movable mounting strips, horizontally opposed to a vertically operated inking means, and with said parallel strips provided with clearance slots and clearance apertures, with said apertures provided with inwardly extending contact lugs and with said lugs upon separate strips, staggered, providing selective contact with operating means intersecting said apertures, providing means to coact said plurality of affixed printing elements with selective inking means.

2,467,182—Method of Making Fiber Containers with Metallic Closures Robert Beattie, Plainfield, N. J., assignor to Tide Water Associated Oil Company, Bayonne, N. J. Filed April 1, 1946—Issued April 12, 1949.

In the application to a fiber container body of



a metallic end closure having an annular channel defined by side walls coated with a sealing compound, the method which comprises in the order steps of (*a*) inserting the edge of the fiber container body into the channel (*b*) forming a circumferential corrugation in the outer closure wall defining said channel while simultaneously forming an oppositely disposed corrugation in the inner closure wall defining said channel, said corrugations being formed sufficiently deep to deform the fiber container, to trap sealing compound between the channel and the container body edge and in predetermined areas between the fiber body and the side walls defining said channel with resulting formation of voids containing insufficient sealing compound between portions of the channel walls and the container body and then (*c*) reducing the volume between the channel and the edge of the fiber container body by deforming the channel opposite the edge portion of the container body to redistribute a portion of the sealing compound trapped between the container body edge and the channel to the aforesaid voids to form a continuous seal between the end closure and the fiber container.

2,467,192 — Coating Compositions. Martin E. Cupery, Wilmington, Del., assignor to E. I. du Pont de Nemours & Company, Wilmington, Del. Filed April 5, 1946—Issued April 12, 1949.

A coating composition consisting of an aqueous dispersion of at least one dispersible material and the ammonium salt of a long-chain monoalkyl N-substituted amide of bicyclo [2,2,1]-5-heptene-2,3-dicarboxylic acid.

2,467,196—Manufacture of Artificial Fibers. Melvin A. Dietrich, Claymont, Del., assignor to E. I. du Pont de Nemours & Company, Wilmington, Del. Filed July 26, 1946 — Issued April 12, 1949.

A process for obtaining improved fibers of hydrolyzed ethylene/vinyl ester interpolymer, said process comprising wet spinning into an aqueous solution of monosodium dihydrogen phosphate of specific gravity between 1.38 and 1.42 at 25° C. an aqueous solution of a hydrolyzed ethylene/vinyl ester interpolymer in which the ester is that of a monocarboxylic acid and which has at least 80% of the ester groups hydrolyzed to hydroxyl groups and having a molar ratio prior to hydrolysis of vinyl ester to ethylene of between 6:1 and 50:1, said solution containing said interpolymer in amount from 5% to 30% by weight, and containing from 2% to 10% by weight of a water soluble compound having the formula R_nX where R is an aliphatic hydrocarbon radical having from 1 to 5 carbon atoms, X is a radical selected from the group consisting of —OH, —SH, $-NH_2$, =NH, and ≡N, and *n* is an integer of from 1 to 3 whose value is equivalent to the valence of X.

2,467,212 — Liquid Urea-Formaldehyde Compositions. Hamline M. Kvalnes, Wilmington, Del., assignor to E. I. du Pont de Nemours & Company, Wilmington, Del. Filed March 6, 1947 — Issued April 12, 1949.

A process for the preparation of liquid urea-formaldehyde compositions which comprises preparing a liquid mixture from gaseous formaldehyde and water at a temperature of from 60° to 90° C., the weight of the formaldehyde being from 50% to 70% of the weight of the resultant aqueous liquid mixture, keeping the temperature of the said aqueous liquid continuously at 60° to 90° C. until the said liquid is brought into contact with urea, admixing urea with the said liquid in the presence of a buffer which maintains the pH within the range of 7.0 to 9.0, the amount of the said urea being in the proportion of one mol per 4.5 to 7 mols of the said formaldehyde, and maintaining the temperature of the resultant liquid at least momentarily at from 70° to 90° C. whereby a product which remains a clear liquid

when cooled to 25° C. is obtained.

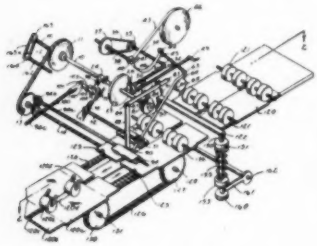
A clear, permanently stable, liquid unpolymerized urea-formaldehyde composition containing a buffer which maintains the pH at from 7.0 to 9.0, said composition being characterized in that it has a total formaldehyde:urea mol ratio of from about 4:1 to 6:1, and a ratio of combined to free formaldehyde of from 1:1 to 3:1, said composition having been prepared in accordance with the process of claim 2.

2,467,229 — Coating Process and Article. Lee Pritzker, Baltimore, Md. Filed May 10, 1946 — Issued April 12, 1949.

The method of ornamenting an article of manufacture which comprises applying thereto an organic base coat of a film-forming component selected from drying oils and resins which dries by oxidation, said coat containing a repellent agent to make the coat repellent when set, to mineral spirits, and containing not more than 10% of a repellency-impeding agent, drying said coat until at least tack free, applying thereover a second organic base coat of a film-forming component selected from drying oils and resins which dries by oxidation, capable of wetting the first coat when set, but containing no repellent agent, and adherent to the first at variegated areas only thereon forming a set pattern and drying the latter, the repellent agent being selected from the group consisting of heavy metal soaps of the higher fatty acids obtained from glyceride oils and synthetic waxes constituted of amines, amides, and imides of fatty acids having more than 7 carbon atoms, and mixtures of said soaps and waxes.

2,467,275 — Taping Machine. Albert F. Shields, Forest Hills, N. Y., assignor to The S & S Corrugated Paper Machinery Co., Inc., Brooklyn, N. Y. Filed December 5, 1945—Issued April 12, 1949.

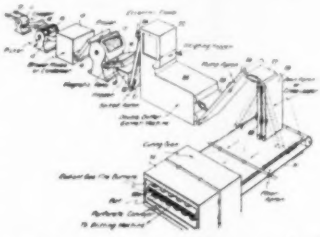
A taping machine for applying a tape to the seams of folded blanks passed therethrough, said machine comprising a tape supply; tape supplying means for drawing tape from the tape supply and



for supplying an end of the tape to the leading end of a seam in the folded blank; means for moving a blank into registry with said tape supplying means so that the leading end of the seam thereof is in registry with the end of the tape at the initiation of the operation of said tape supplying means; means for thereafter drawing said blank past said tape supplying means and means for applying the end of the tape to the leading edge of the seam, the movement of the blank cooperating with said tape applying means to draw off additional tape from said tape supply and apply the same to said seam; and means for cutting said tape at a point registering with the trailing end of the seam; a member operable on the leading edge of the blank to regulate its movement with respect to the tape applying means.

2,467,291 — Process for Forming Felted Fibrous Insulating Material. Jay O. Brelsford, Kansas City, Kans., and Hubert O. Sheidley, Kansas City, Mo., assignors to Gustin-Bacon Manufacturing Company. Filed October 9, 1944—Issued April 12, 1949.

A process of forming a strip of felted fibrous insulating material comprising the steps of sepa-



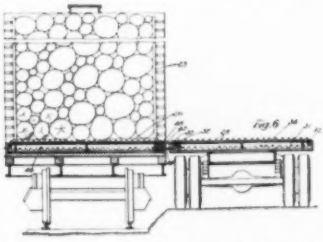
rating the mineral fibers and forming a web of the fibers wherein the fibers are of substantially uniform length and laid up longitudinally of the web, cross lapping the web to build up a mat constituting a plurality of layers, moving the mat from the location of the cross lapping operation to form a continuous strip of cross lapped layers, and stretching the strip in a direction transverse to the lay of the fibers as the strip passes a predetermined point in its travel away from the location of the cross lapping operation.

2,467,324 — Reducing Viscosity of Cellulose Nitrate with Morpholine. Stewart B. Luce, Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo. Filed November 20, 1943—Issued April 12, 1949.

A process for reducing the viscosity of cellulose nitrate which comprises treating cellulose nitrate with morpholine.

2,467,354—Log Handling Equipment. Harold L. Baldwin, St. Johnsbury, Vt. Filed July 31, 1945 — Issued April 12, 1949.

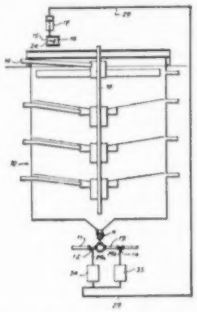
Equipment for handling logs including separate elements movable one with respect to the other



and each provided with a pair of chain conveyors, the said conveyors being movable in aligned paths when the two elements are brought into registration, means for driving all four chains in synchronization, and an upright stake having a horizontally elongated foot shaped to fit said chains and adapted to pass from one to the other, and means preventing movement of said foot lengthwise with respect to said chains.

2,467,409 — Automatic Sludge Control for Sedimentation Tanks. William L. Smith, Savannah, Ga. Filed April 18, 1945—Issued April 19, 1949.

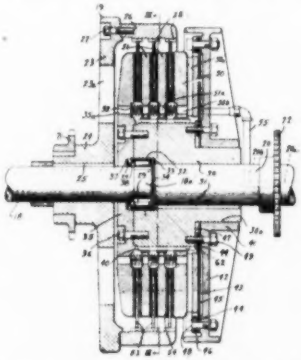
An automatic sludge control system for conventional sedimentation apparatus provided with means for introducing a mixture of liquid and solids, with means for withdrawing the clarified liquids, with an outlet for delivering the sludge, with means for scraping the sludge to the outlet, with a driving mechanism for the last named scraping means, including a driving shaft, with a sludge discharge pipe connected with the outlet, with a regulating valve therein, and with an overload indicator including a movable member operated by the driving shaft, said system comprising a pressure pipe for injecting water into the discharge pipe, a control valve within said pressure pipe, means for operating said control valve, means for operating the regulating valve in the sludge discharge pipe, means operated by the movable member of the overload indicator for



opening the regulating valve at a predetermined load in order to reduce the load and means operated upon continued prevailing of an overload after opening of the regulating valve for opening the control valve in the water carrying pressure pipe.

2,467,829 — Paper Machine Clutch Drive. Lloyd Hornbostel, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis. Filed March 22, 1943 — Issued April 19, 1949.

In a safety drive adapted for driving the various sections of a paper making machine including a single prime mover, a main drive shaft driven



by said prime mover, and a driven shaft for each of the various sections, a plurality of fluid pressure-operated clutches each having a plurality of friction disks driven by said main drive shaft, a plurality of shoes in each clutch connected to a driven shaft and adapted to frictionally engage said disks, a diaphragm for each clutch actuating the shoes into frictional engagement with under controlled pressure to the diaphragm of the disks of the clutch, means for supplying air each clutch for slip-coupling the shoes with the disks of the clutch, and means responsive to relative speeds of the main drive shaft and each driven shaft for increasing the air pressure supplied to each diaphragm to frictionally couple the shoes with the disks without slippage.

Waldron Machines Improve Coating Processes

Probably no other single year in the history of the paper industry has seen a greater number of new processing machines than have been developed during the past 12 months. Much of this development has been made necessary to keep pace with advances in paper production means and methods. Methods of coating have undergone great transformation during the past year as a direct result of the introduction of many new coating materials and the steady and urgent demand for maintaining greater uniformity of coating at higher and higher speeds.

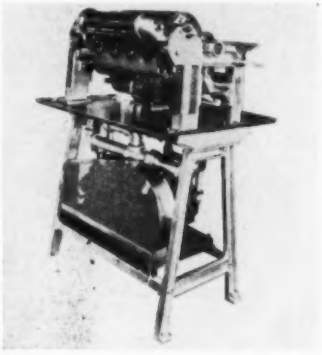


Figure 1. Laboratory Microjet Coater

This situation has taxed the ingenuity of machine builders, among which is the John Waldron Corp. of New Brunswick, N. J. During the past 12 months Waldron has introduced at least six new machines including new types of coaters now operating in mills and converting plants throughout the industry.

One of these is the Waldron Microjet Laboratory Coater, Figure 1, developed to meet the needs of research and production departments for testing formulations of coating compounds that are suitable for the new air blade method of coating recently introduced. The Laboratory Microjet operates on the air blade principle in the same way as the full size Microjet coaters except that it is designed to coat a sheet eight inches by 23½ inches. By adding a simple unroll and winder, a continuous web of paper or board can be handled to give a good sample of what may be expected in a full production run.

Another recent Waldron machine is the Diatron Coater, Figure 2, wheih represents a development which covers a wide field for certain types of operations in applying coatings. Coatings which this machine applies include lacquers with a high percentage of solids, metallics, vinyls, pigmented oils, etc. Gumming can be done on the Diatron with less water to evaporate than is the case with some other types of coaters. It is capable of handling coatings containing a very high percentage of solids, as well as materials which may have an irregular caliper across the width. It features an arrangement of a diaphragm and coating knife or roll that bring the surface of the material level at the time of application of the coating.

The Aut-O-Lac sheet varnishing machine, Figure 3, is another recent Waldron development. It handles all the popular size sheets and has many design and construction improvements

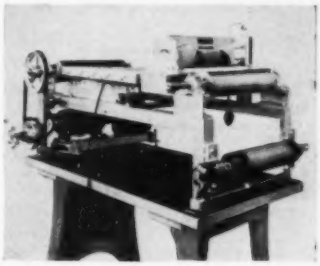


Figure 2. Diatron Coater

for speeding up production of lacquered labels and similar pieces for lithographers and printers.

Latest of the new Waldron machines are the Hydrowind constant tension batcher or winder (*Figure 4*), and the Davidson-Pomper Pick Tester (not pictured herewith). The Hydrowind can be used for winding paper, plastics, foils and fabrics. It gives accurate tension control and once tht operator has set the desired tension, as indicated on a selector dial, no other adjustments are required to complete the winding of the rolls. It delivers a full range of tensions from practically zero to the maximum capacity which is 4 H. P. The hydraulic system of the Hydrowind unit produces a smooth drive at all speeds.

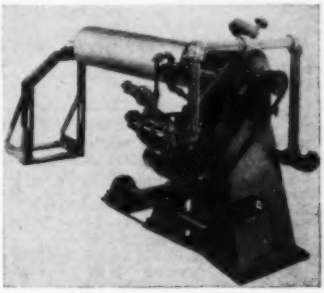


Figure 4. Hydrowind constant tension winder.

The Davidson-Pomper Pick Tester, developed by the John Waldron Corp. in cooperation with Mr. Davidson, on the same principle as the original Davidson tester, features a number of refinements such as greater speed variation and maintaining the plates at constant temperature on the feed table rather than on a separate heater plate. It is designed to give a more reliable indication of surface strength and resistance to picking, than the conventional wax test and is applicable to any kind of coating thus removing the limits imposed with the wax test.

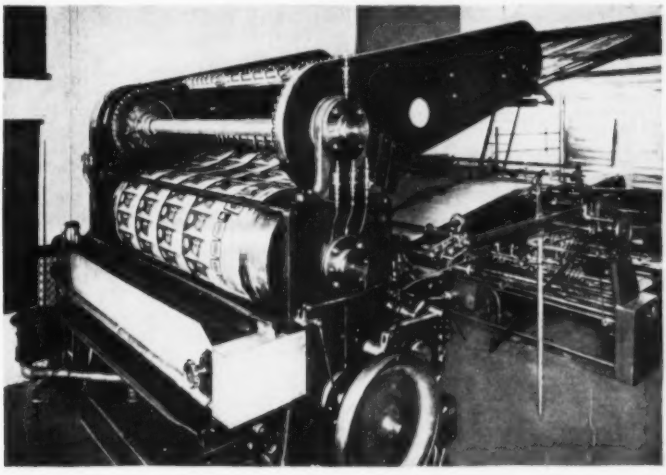


Figure 3. Auto-Lac sheet varnishing machine.

PRICES . . . . . .

The prices below reflect general market quotations applying to those standard grades in which the normal volume of business is being done.

NEW YORK

Delivered New York

Standard News, per ton—

Rolls, contract	$100.00/	—
Sheets	115.00/	—

F.o.b. Mills, Carload freight allowed, dock N. Y.

Kraft— per cwt., 40# base wgt.

Standard Wrapping Rolls	$6.50/	—
No. 1 Wrapping Rolls	7.25/	—
Standard Bag	6.00/	—

Tissues— per ream 24x36 (480) 10 lbs. 2500 lbs. or more

Wh. No. 1 Frd.	$155.00/	—
Wh. No. 1 M. G.	150.00/	—
Wh. No. 1½	140.00/	—
Wh. No. 2	120.00/	—
Kraft Anti-Tar	1.37½/	—
Shrd. Wh. No. 1 per lb.	.11½/	—

Toilet— per case of 100 rolls—1 M sheets.

Unbleached 4½x4½	$5.75/	—
Bleached 4½x4½	6.95/	—
Bleached 4½x5	8.80/	—
Per Case of 50 rolls—2000 sheets		
Unbleached 4½x4½	$5.75/	—
Bleached 4½x4½	6.80/	—
Per Case of 100 rolls—1000 sheets		
Facial, 4½ x 5, 2 ply	$8.95/$9.45	

Paper Towels—per case of 3750—Zone 1.

Wh. Jr. M'tif'd 9¼x9½	$5.25
Br. Sr. M'tif'd 10x12	3.60
Br. Jr. M'tif'd 9½x9¼	3.10
Br. Jr. Sgl. fold 10x10¼	3.15
Blchd. 7½ x 11, 24/25 rolls	$3.95/$6.25

Manila, per cwt.

No. 1 Jute Tag 40 lb., sheets*	$15.05/$17.50
Reg. Jute M.F. Manila, sheets*	13.50/ 15.50
Wrapping Manila	8.75/ 10.50
Printing Manila	10.00/ 11.00

* Less usual allowance for rolls.

Boards, per ton—

Filled News	$77.50/ —
Plain Chip	75.00/ —
Blchd. Mla. L-d. Chip*	92.50/ —
White Pat. coated*	110.00/
Kraft Liners 42 lb.	100.00/
Kraft Corr. .009	105.00/
Binders Boards	110.00/116.00

* Base Prices per 10 tons. Less than 10 ton but over 3 tons, add $2.50; three tons or less, add $5; regular 35-39 basis, add $5; basis 40-49, add $2.50; basis 91-100, add $2.50; basis 101-120, add $5.

WORLD WOOD PULP MARKETS

Fourth Quarter Contract Prices, Per Short Air-Dry Ton

	Delivered, with varying freight allowances		On dock Atlantic Ports Full freight allowance		
	U. S.	Canadian	Swedish	Finnish	Norwegian
Groundwood	$65.00/ —	$65.00/ —			
Soda, Bleached	113.00/ —	113.00/ —		Competitive	
Sulphate, Bleached	118.00/126.00	126.00/ —	125.00/128.00		
Sulphate, Unbl'd North'n		82.50/105.00	82.50/ 85.00	with	
Sulphate, Unbl'd South'n	80.00/ 82.50				
Sulphite Blchd. (S'ftw'd)	118.00/ —	118.00/ —	118.00/ —	Domestic	Competitive
Sulphite, Blchd. (H'dw'd)	113.00/ —				
Sulphite, Unbleached	100.00/ —	100.00/ —	100.00/ —	Grades	
Sulphite, Unbl'd (Glassine)	105.00/ —	105.00/ —	104.00/105.00		

WASTE PAPER MARKET

Prices to Mills (Per Ton) F.o.b. Cars

	New York	Philadelphia	Boston	Chicago
	Oct. 1	Sept. 27	Oct. 1	Oct. 1
No. 1 Mixed Paper	$7.00/ $8.00	$6.00/ $7.00	$7.00/ —	$10.00/ —
Boxboard Cuts	7.00/ 8.00	5.00/ 6.00	— / 5.00	13.00/ —
Mill Wrappers	11.00/ 12.00	7.00/ 9.00	— / 9.00	12.00/ —
No. 1 News	9.00/ 10.00	9.00/ 10.00	9.00/ 10.00	16.00/ —
Over-issue News	14.00/ 15.00	12.00/ 14.00	8.00/ 10.50	19.00/ —
Corrugated Containers	15.00/ 17.00	16.00/ 17.00	14.50/ 15.50	20.00/ —
New Corrugated Cuts	18.00/ 20.00	20.00/ 23.00	16.00/ —	23.00/ —
Double Kraft Ld. Corr. Cuts	34.00/ 35.00	30.00/ 35.00	25.00/ —	35.00/ —
Used Kraft Bags	25.00/ 30.00	18.00/ 22.00	25.00/ 30.00	20.00/ —
No. 1 Brown Kraft Paper	25.00/ 30.00	25.00/ 30.00	25.00/ —	20.00/ —
Super Resorted Br. Kraft	25.00/ 30.00	35.00/ —	40.00/ —	35.00/ —
New Br. Kraft Env. Cuts	65.00/ 70.00	60.00/ 65.00	60.00/ 65.00	55.00/ —
New Br. Kraft Cuts	40.00/ 45.00	55.00/ —	45.00/ —	50.00/ —
No. 1 Gdwd. Shvs.	15.00/ 20.00	15.00/ 20.00	25.00/ —	26.00/ —
White Newsblanks	50.00/ 55.00	35.00/ 40.00	— / 50.00	35.00/ —
No. 1 Flyleaf Shvs.	25.00/ 30.00	17.00/ 22.00	35.00/ 45.00	35.00/ —
No. 1 Soft Wht. Shvs.	75.00/ 80.00	60.00/ 65.00	70.00/ 80.00	55.00/ —
Super Soft Wht. Shvs.	90.00/100.00	65.00/ 70.00	80.00/ 90.00	60.00/ —
Hd. Wht. Shvs.	85.00/ 95.00	75.00/ 80.00	80.00/ 90.00	80.00/ —
Hd. Wht. Env. Cuts.	100.00/105.00	90.00/100.00	90.00/105.00	90.00/ —
New Manila Env. Cuts.	65.00/ 75.00	60.00/ —	60.00/ 70.00	55.00/ —
Col. Tab Cards	30.00/ 35.00	30.00/ 35.00	35.00/ —	40.00/ —
Manila Tab Cards	60.00/ 65.00	60.00/ 65.00	75.00/ 80.00	65.00/ —
No. 1 Mixed Ledger	30.00/ 35.00	30.00/ 35.00	37.50/ —	40.00/ —
White Ledger	45.00/ 55.00	40.00/ 45.00	50.00/ 60.00	50.00/ —
Mixed Books & Mags.	7.00/ 8.00	7.00/ 8.00	12.00/ —	7.00/ —
No. 1 Rep'd Hvy. Books & Mags.	20.00/ 25.00	18.00/ 22.00	22.00/ 23.00	20.00/ —

The following prices are representative of distributors' resale prices, all deliveries in Zone 1:

Rag Content Bonds and Ledgers—

White, 20 lb.

Bonds

	4 Ctns.
	per cwt.
100% Rag Ex. No. 1	$51.40/$53.90
100% Rag	44.55/ 46.15
75% Rag	33.90/ 35.40
50% Rag	28.10/ 29.55
25% Rag	24.85/ 26.80

Ledgers

	4 Ctns.
	per cwt.
100% Rag Ex. No. 1	$52.65/$54.55
100% Rag	45.65/ 46.40
75% Rag	35.15/ 36.10
50% Rag	29.40/ 30.05
25% Rag	26.15/ 26.80

Sulphite Bonds and Ledgers

White, 20 lb.

Bonds

	4 Ctns.
	per cwt.
No. 1	$17.50/ —
No. 2	16.65/ 16.75
No. 4	15.60/ 15.95

Ledgers

	4 Ctns.
	per cwt.
No. 1	$18.80/ —
No. 2	18.05/ —

White Book

Conversion Coated	Case
	per cwt.
No. 1	$19.75/$20.90
No. 2	19.25/ 19.65
No. 3	17.75/ 18.90
Machine Coated	
No. 1	16.40/ 16.65
No. 2	14.90/ 15.15
Uncoated	
No. 1 Antique (Watermarked)	16.40/ 17.90
Offset	15.15/ 16.65
A Grade E. F.	15.40/ —
A Grade S. C.	15.90/ 16.15
B Grade E. F.	14.90/ 15.15
B Grade S. C.	15.40/ 15.65

Twines

All Prices Nominal, F.o.b. Mill

(Soft Fiber)

Coarse Polished—India	.35½/	.36½
Fine Polished India	.41½/	.45
Unpolished—Paper Makers	.32¼/	.34½
Tube Rope	.33¼/	.35½
Wrapping	.36 /	.38½
Cotton	.58 /	.60
Polished Cotton	.55 /	—
(Hard Fiber)		
Mex. Sisal	.21 /	.27
(American Hemp)		
Polished Hemp	.45 /	.48
Unpolished	.35 /	.37½

Rag Market

New Domestic Cotton Cuttings

(Prices to Dealers, F.o.b. Ship. Pt.)

	Per 100 lbs.	
White Shirt	$10.00/	$10.50
Unbleached Muslin	10.00/	10.50
Light Silesias	7.00/	7.50
White Back Blue Overalls	6.25/	6.50
Blue Overalls	6.00/	6.25
Fancy Shirt	4.50/	5.00
Percales	5.50/	6.00
Light Prints	5.50/	6.00
No. 1 Washables	2.75/	3.00
Bleachable Khaki	5.00/	5.50
Unbleachable Khaki	4.50/	5.00
Cottonades	4.25/	4.75
Lt. Flannelettes	7.00/	7.50
Men's Corduroy	3.50/	4.00
Women's Corduroy	3.00/	3.50

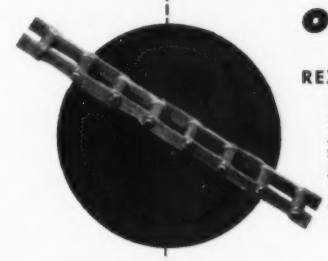
Old Domestic Cotton Rags

(Prices to Dealers, F.o.b. Ship. Pt.)

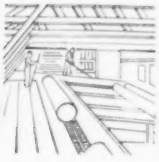
	Per 100 lbs.	
No. 1 Whites, Repacked	$4.25/	$4.75
No. 1 Whites, Miscellaneous	3.50/	4.00
No. 2 Whites, Repacked	2.75/	3.00

Chain Facts

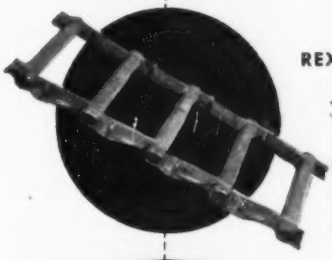
on REX pulp mill chains



REX COMBINATION AND DUROBAR CHAINS

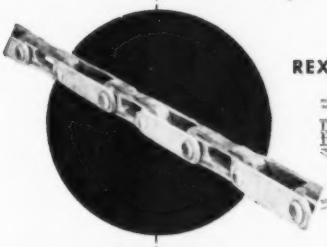


are husky chains with inside block links of malleable iron or Rex Z-Metal and side bars blanked from high carbon steel. Side bar pin holes are accurately punched for correct pitch and good drive fits. Milled flats on the ends of the pins prevent turning in the side bars and prolong chain life. Durobar Chains have reinforced outer barrel faces which eliminate rolling, grinding contact with sprocket teeth and thus reduce chain wear.

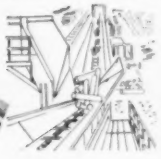


REX H-TYPE CONVEYOR CHAINS

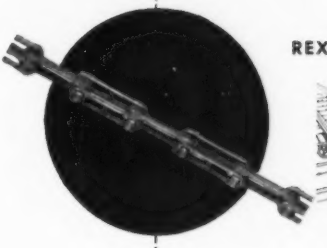
offer an efficient, economical means for conveying slabs, sawdust and other mill refuse. Operating in shallow troughs, these chains, because of their great width, offer the advantage of large capacity at low speeds. Chain links are one-piece castings. Inner barrel faces are designed for smooth operation over sprockets. Outer barrel faces are designed to act as scrapers. Wide wearing shoes, cast on the side bars, take the sliding wear, and vertical lugs reinforce and protect rivet ends.



REX MILL REFUSE AND LOG CONVEYOR CHAINS



are stronger, tougher chains designed specifically for longer life under the pounding of logs and slabs. Alternating wide cast block links and steel side bar links combine rugged strength and a large sliding surface as well as maximum bearing area on the rivets. Cast block links are of heavy design, reinforced with two struts that provide a sturdy anchorage for scraper or chair attachments.



REX DROP FORGED CHAINS

are preferred for log haul and refuse conveyor service where high strength and relatively low cost are desired. Drop Forged Chains are flexible in two directions, and assembly and disassembly can be made without the use of tools. Chain parts are forged from high carbon steel and are carefully designed for large bearing areas and wearing surfaces. Links can be turned over to provide a new sliding surface after long service.

For the complete story on the complete Rex line of pulp mill chains, call your Rex District Office or write direct for Catalog 48-27. Chain Belt Company, 1605 W. Bruce St., Milwaukee 4, Wis.

CHAIN BELT COMPANY REX

DRIVE AND CONVEYOR CHAINS

FIRST FOR LASTING SERVICE

now available from stock

N. Y. Sun, Fort Avalon, Cornerbrook, 440 rolls.
N. Y. Times, Fort Avalon, Cornerbrook, 781 rolls.
Madden Reeve Angel & Co., Inc., Mormacoak, Kotka, 864 rolls.

Wallpaper

Southern Wallpaper Co., American Chief, Manchester, 7 ctns.
C. F. Lamamine, Burckel, Antwerp, 4 pkgs.
Rohner Gehrig & Co., Mauretania, Southampton, 1 cs.
American Express Co., American Planter, London, 20 ctns.

Paperhangings

W.H.S. Lloyd & Co., American Planter, London, 7 ctns., 3 cs.

Cardboard

F. C. Strype, N. Amsterdam, Rotterdam, 11 cs. (glazed parchment).

Wrapping Paper

Resolute Paper Products Corp., Mormacmail, Hango, 732 rolls.
Jay Madden Corp., Mormacmail, Hango, 1121 rolls.
Jay Madden Corp., Mormacoak, Kotka, 44 bls.

Boxboard

Jay Madden Corp., Mormacmail, Hango, 159 rolls (folding).
General Motors Overseas Corp., Mormacmail, Gothenburg, 52 bdls.

Printing Paper

Carbon Web Co., Stockholm, Gothenburg, 16 rolls (glazed).
Kraemer & Co., American Planter, London, 3 cs.

Paper Napkins

B. M. Heede, Stavangerfjord, Oslo, 9 bls.
H. W. Robinson & Co., American Planter, London, 23 cs.

Serviettes

(———), Parthia, Liverpool, 10 crates.

Paper Towels

H. W. Robinson & Co., American Planter, London, 2 cs.

Tissue Paper

B. F. Drakenfeld & Co., Parthia, Liverpool, 21 cs.
Intermaritime Forwarding Co., Parthia, Liverpool, 4 cs.
B. F. Drakenfeld & Co., Vardulia, Liverpool, 2 cs. (pottery), 27 cs.

Gummed Paper

B. F. Drakenfeld & Co., Vardulia, Liverpool, 5 cs.

Drawing Paper

D. Hauser, Mauretania, Southampton, 7 cs.
H. Reeve Angel & Co., Inc., American Planter, London, 1 cs.

Filter Paper

H. Reeve Angel & Co., Inc., Mauretania, Southampton, 2 cs.
H. Reeve Angel & Co., Inc., American Planter, London, 6 cs.

Baryta Coated Board

American Express Co., American Planter, London, 100 drums.

Decalcomanias

Gondrand Bros., American Flyer, Hamburg, 1 cs.
Person & Co., Mormacoak, Gdynia, 2 cs.

Baryta Paper

W. Remerdes, Black Eagle, Bremen, 1 pkge.

Parchment Paper

H. P. Andrews Paper Co., Black Eagle, Antwerp, 1 cs.

Miscellaneous Paper

H. W. Robinson & Co., Mauretania, Southampton, 8 cs.
Masses Barnet, Ile de France, Havre, 1 cs.

Rags, Baggings, Etc.

Chase National Bank, American Chief, Glasgow, 99 bls. old bagging.
(———), American Chief, Glasgow, 231 bls. old bagging.
National City Bank, American Chief, Glasgow, 90 bls. old bagging.
(———), American Chief, Glasgow, 446 bls. jute waste.
L. Gottlieb, Vilcke Maersk, Antwerp, 229 bls. old jute rags.

U. S. IMPORTS WOODPULP

Preliminary, August, 1949

Item	Country of Origin	Short Tons
Mechanical		
Unbl'chd.	Canada	14,984
	Finland	564
		15,548
Screenings	Canada	360
Chemical		
Sulfite, Unbl'chd.	Canada	20,965
	Sweden	8,130
	Finland	1,335
		30,430
Screenings	Canada	102
Sulfite, Bl'chd. Rayon & Special Chem. Grades	Canada	8,277
Other	Canada	23,895
	Sweden	1,595
	Norway	84
	Finland	1,680
		27,254
Sulfate, Unbl'chd.	Canada	11,109
	Sweden	536
	Finland	1,904
		13,549
Sulfate, Bl'chd.	Canada	33,882
	Sweden	3,527
		37,409
Soda, Unbl'chd. & Bl'chd.	Canada	2,351
Totals, August	Canada	115,925
	Sweden	14,788
	Norway	84
	Finland	5,483
		135,280

A. de Vries Trading Corp., Rondo, Rouen, 65 bls. old rags.
Padawer Waste & Fiber Co., Mormacreed, Recife, 535 bls. cotton waste.
New England Waste Co., Mormacreed, Cabedello, 530 bls. cotton linters.
Cowa & Co., Mormacreed, Cabedello, 83 bls. cotton picker waste.
J. Eisenberg & Son, Agwiking, Havana, 19 bls. rags.
E. Butterworth & Co., Inc., Parthia, Liverpool, 16 bls. wool rags.
Chase National Bank, Parthia, Liverpool, 8 bls. wool waste.
(———), Parthia, Liverpool, 153 bls. new wool rags, 4 bls. new wool thread waste, 37 bls. old wool rags.
American Express Co., Parthia, Liverpool, 38 bls. new wool rags, 3 bls. new wool thread waste, 12 bls. wool flocks, 10 bls. wool card waste.
Irving Trust Co., Black Eagle, Antwerp, 61 bls. old bagging.
(———), Sobieski, Genoa, 134 bls. old hemp rags.
Brandwein Mazur Co., American Planter, Bremen, 79 bls. bagging.

Casein

Borden Co., Chemical Division, Mormacmail, Copenhagen, 11 bags.
E. M. Sergeant Pulp & Chemical Co., Mormacisle, Buenos Aires, 500 bags.
International Packers Commercial Co., Mormacgulf, Buenos Aires, 200 bags.
Bank of the Manhattan Co., Pioneer Glen, Melbourne, 200 bags (rennet).

China Clay

English China Clays Sales Corp., Wells City, Avonmouth, 364 bags.

Woodpulp

Pulp Sales Corp., Mormacmail, Hango, 1 pcl. woodpulp (sample).
The Borregaard Co., Inc., Stavangerfjord, Oslo, 800 bls. dry bleached sulphite pulp.
Elof Hansson Inc., Mathilda Thorden, Sundsvall, 3000 bls. half prime strong sulphite pulp, 3000 bls. strong sulphite pulp, 1500 bls. prime strong sulphite pulp, 1500 bls. prime strong bleachable sulphite pulp (to Albany or Newark).
Price & Pierce, Ltd., Bernhard Ingelsson, Wallvik, 4500 bls. dry sulphite pulp.
The Borregaard Co., Inc., Stockholm, Gothenburg, 800 bls. sulphite pulp.

Woodpulp Boards

Absorbo Beer Pad Co., Mormacmail, Gdynia, 40 bls.
Jay Madden Corp., Mormacmail, Hango, 375 bls. (solid white).

IMPORTS AT NEWARK

Week Ending Oct. 1

Perkins Goodwin & Co., Bernhard Ingelsson, Norrsundet, 1000 bls. dry sulphite pulp.
Celu'ose Sales Co., Bernhard Ingelsson, Hernosand, 2550 bls. sulphite pulp.
Cellulose Sales Corp., Bernhard Ingelsson, Obbola, 350 bls. dry sulphate pulp.
Cellulose Sales Corp., Bernhard Ingelsson, Sundsvall, 2025 bls. dry sulphite pulp, 3300 bls. kraft sulphate pulp.

IMPORTS AT BOSTON

Week Ending Oct. 1

Borden Co., Chemical Division, Bowmonte, Buenos Aires, 500 bags ground lactic casein, 66138 bls.
Crawford Co., Bowmonte, Buenos Aires, 500 bags lactic casein.

IMPORTS AT ALBANY

Week Ending Oct. 1

Price & Pierce, Ltd., Bernhard Ingelsson, Wallvik, 2400 bls. dry sulphite pulp.
Perkins Goodwin & Co., Bernhard Ingelsson, Norrsundet, 2300 bls. dry sulphate pulp.
Cellulose Sales Co., Bernhard Ingelsson, Hernosand, 546 bls. mechanically ground woodpulp.
Cellulose Sales Co., Bernhard Ingelsson, Sundsvall, 1200 bls. dry sulphite pulp, 1200 bls. kraft sulphate pulp.

IMPORTS AT BALTIMORE

Week Ending Oct. 1

Pulp Sales Corp., Mormacmail, Hango, 1931 bls. white dry mechanically ground pulp.
Sandvik Steels, Inc., Mormacmail, Gothenburg, 1 cs. wrapping paper.
Pulp Sales Corp., Mormacoak, Kotka, 360 bls. prime unbleached kraft sulphate pulp, 3910 bls. prime unbleached strong sulphite pulp, 2794 bls. white dry mechanically ground woodpulp.

IMPORTS AT PHILADELPHIA

Week Ending Oct. 1

Resolute Paper Products Corp., Mormacmail, Hango, 255 rolls wrapping paper.
Jay Madden Corp., Mormacmail, Hango, 187 rolls wrapping paper.
Pagel Horton & Co., Inc., Mormacmail, Gothenburg, 509 bls. woodpulp.
Pulp Sales Corp., Mormacoak, Kotka, 1040 bls. prime unbleached sulphate pulp, 2260 bls. prime unbleached strong sulphite pulp, 2032 bls. white dry mechanically ground woodpulp.
Madden Reeve Angel & Co., Inc., Mormacoak, Kotka, 679 rolls newsprint.
Elof Hansson Inc., Mathilda Thorden, Sundsvall, 1804 bls. strong sulphite pulp.
Price & Pierce, Ltd., Bernhard Ingelsson, Wallvik, 500 bls. mechanically ground woodpulp, 4800 bls. dry sulphate pulp.
Perkins Goodwin & Co., Bernhard Ingelsson, Norrsundet, 700 bls. dry sulphate pulp.
Cellulose Sales Co., Bernhard Ingelsson, Hernosand, 600 bls. sulphate pulp, 1800 bls. sulphite pulp.

Cellulose Sales Co., Bernhard Ingelsson, Obbola, 1750 bls. dry sulphate pulp, 600 bls. kraft sulphate pulp.

Cellulose Sales Co., Bernhard Ingelsson, Sundsvall, 1150 bls. dry sulphite pulp, 300 bls. kraft sulphate pulp.

IMPORTS AT NORFOLK

Week Ending Oct. 1

Loumar Textile By Products Co., American Chief, Manchester, 40 bls. old bagging.

F. P. Gaskell & Co., American Chief, Glasgow, 19 cs. coated paper (for cigarette tips).

FINANCIAL RECORD •

PREFERRED STOCKS	Per Share Earnings: Calendar Year 1948	Per Share Earnings: 12 Mo. to Approx. 6/30/49	Indic. Annual Divid. Rate	Oct. 4 Approx Market Price
Armstrong Cork Co. $3.75 Cum.	$46.33*	$38.47*	$3.75	$98⅛
Armstrong Cork Co. $4.00 Cum. Conv.	46.33*	38.47*	4.00	109⅛
Celotex Corp. 5% Cum.	26.42c	10.33p	1.00	16⅜
Champion Paper & Fibre $4.50 Cum.	99.97f	19.91r	4.50	96⅞
Container Corp. of Amer. 4% Cum.	105.41	99.87	4.00	99½
Crown Zellerbach $4.20 Cum.	61.84i	61.00p	4.20	100½
Crown Zellerbach $4.00 Cum. Conv. 2nd	58.51i*	57.90p*	4.00	97½
Dixie Cup Co. $2.50 Cum. Conv. Cl. A	10.10	10.04	2.50	48½
Flintkote Co. $4 Cum.	83.25	66.07	4.00	103
Robert Gair Co., Inc. 6% Cum.	17.08	13.73	1.20	16⅞
International Paper Co. $4 Cum.	263.00	254.21	4.00	100½
Johns-Manville $3.50 Cum.	209.89	212.03	3.50	112⅝
Kimberly Clark Corp. 4½% Cum.	80.74	74.36	4.50	101
Kimberly Clark Corp. 4% Cum. Conv. 2nd	41.59*	44.25*	4.00	100½
MacAndrews & Forbes 6% Cum.	62.23	58.66	6.00	135½
Mead Corp. 4¼% Cum.	73.46	68.78k	4.25	91
Mead Corp. 4% Cum. Conv. 2nd	29.91*	24.30k*	2.00	32⅛
Paraffine Cos. Inc. 4% Cum. Conv.	156.11	136.31	4.00	103
Rayonier Inc. $2 Cum.	16.43	13.99	2.00	30⅝
St. Regis Paper Co. 4.40% 1st A	79.90	51.11	4.40	85½
Scott Paper Co. $3.40 Cum.	59.06	55.14	3.40	95
U. S. Gypsum Co. 7% Cum.	314.45	296.82	7.00	186½
United Wallpaper Inc. 4% Cum. Conv.	(d)0.79	20.50	2.00	27
West Virginia Pulp & Paper 4½% Cum.	79.45c	69.93p	4.50	107¼

COMMON STOCKS				
APW Products Co.	$0.73	(d)$0.56	(m)	2¾
American Writing Paper Corp.	(d)0.13	(d)0.16	$0.25	6⅜
Armstrong Cork Co.	7.54	6.13	3.00	49½
Celotex Corp.	7.21c	2.75p	1.00	17⅜
Certain-Teed Prods. Corp.	4.02	3.21	1.00	14⅛
Champion Paper & Fibre	8.70f	1.70r	2.00	25¾
Congoleum Nairn Co.	5.78	4.92	2.25	27⅞
Container Corp. of America	10.12	9.52	4.50	36¾
Crown Zellerbach	6.70e	6.68p	2.00	27¾
Dixie Cup Co.	6.70	6.65	1.00	31½
Eastern Corp.	4.76	1.27	(h)	8⅞
Flintkote Co.	5.86	4.40	2.50	26⅞
Robert Gair Co., Inc.	2.67	2.10	0.70	7
Great Northern Paper Co.	4.63	5.32	2.80	39⅜
International Paper Co.	16.73	16.19	5.00	60⅞
Johns-Manville Corp.	5.22	5.27	2.00	41¾
Kimberly Clark Corp.	5.02	4.55	1.65	22⅞
MacAndrews & Forbes Co.	3.68	3.56	2.50	34¾
Marathon Corp.	4.11c	3.42	1.40	21¾
Mead Corp.	6.36	5.84k	1.00	13½
National Container Corp.	2.28	1.38	0.40	6¾
Paraffine Cos. Inc.	2.45	2.14	1.20	19
Rayonier, Inc.	9.09	7.55	2.00	23¾
Ruberoid Co.	11.80	9.48	3.25	52⅞
St. Regis Paper Co.	2.71	1.64	0.60	7⅜
Scott Paper Co.	4.15	5.02	2.50	60¼
Sutherland Paper Co.	6.02	4.92	2.50	36¾
Union Bag & Paper Corp.	9.17	6.50	3.00	25½
United Board & Carton	2.04b	(d)1.72k	(e)	7
U. S. Gypsum Co.	15.04	14.18	6.00	99
United Wallpaper	(d)0.10	0.59	(n)	3⅞
West Virginia Pulp & Paper	11.33c	9.70p	3.00	42¾

(a) 12 months to approximately 3/31/49
(b) Year ended 11/23/48
(c) Year ended 10/31/48
(d) Deficit
(e) Omitted dividend 2/4/49
(f) 11 months to 3/31/49
(g) 12 months to approximately 1/31/49
(h) Directors took no action on 8/2/49 dividend—last payment 5/2/49
(i) 12 months to approximately 4/30/49
(j) 8 months to 12/31/48
(k) 12 months to approximately 6/12/49
(m) Directors took no action on July, 1949, dividend—last payment 1/10/49
(n) Last payment 25c, 9/16/47
(p) 12 months to approximately 7/31/49
(r) 3 months to 6/30/49
(s) 12 months to 8/20/49

(*) Earnings per combined preferred shares.

Dividends Declared

St. Lawrence Paper Mills Co., Ltd., has declared a dividend of $1.50 per share on its outstanding first cumulative redeemable preferred shares, another dividend of 60 cents per share on its outstanding second cumulative redeemable preferred shares, and a dividend of 50 cents per share on its outstanding common stock, all payable October 25 to holders of record October 4.

St. Lawrence Corp., Ltd., has declared a dividend of 50 cents per share on its outstanding first cumulative convertible preferred shares and another dividend of 18¾ cents on its outstanding second cumulative preferred shares, both payable October 25 to holders of record October 14.

Bathhurst Power & Paper Co., Ltd., has declared a quarterly dividend of 37½ cents per share, plus an extra dividend of 12½ cents per share, on its outstanding Class "A" shares, payable December 1 to holders of record November 3.

British Columbia Pulp & Paper Co., Ltd., has declared a dividend of $1.75 per share on its 7 per cent preferred stock, plus $17.50 arrears, payable November 1 to holders of record October 15.

Building

- **FOR THE PAPER INDUSTRY**
- We design, build, and equip paper and pulp mills . . . steam generating plants . . . and facilities for eliminating stream pollution.
- Under one contract and one responsibility, we deliver jobs complete, ready for operation.
- We also furnish engineering reports and surveys. Current cost data available at all offices.

The H.K. Ferguson Co.
INDUSTRIAL ENGINEERS AND BUILDERS

THE FERGUSON BUILDING • CLEVELAND, OHIO
OFFICES IN NEW YORK, HOUSTON, CHICAGO, CINCINNATI AND LOS ANGELES

craftsmanship

Another good reason why
Appleton Wires
are Good Wires

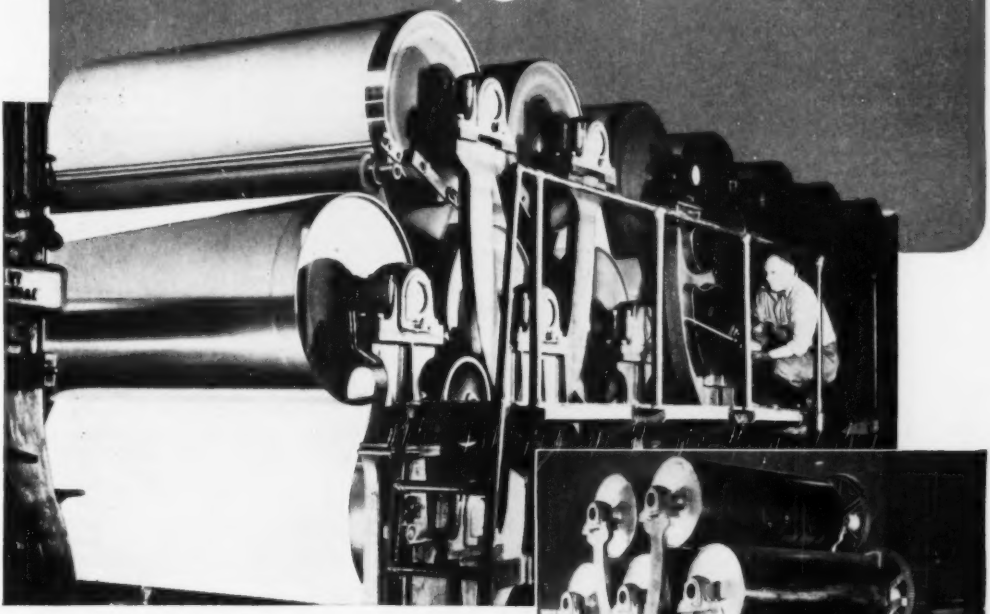
-
-
-

Craftsmanship is more than ability accumulated through long years of experience . . . it's how a specialist feels toward his work and toward his place of employment. In fifteen years only one skilled employee has left Appleton Wire Works, Inc. We are proud of our record. We are proud of Appleton craftsmanship.

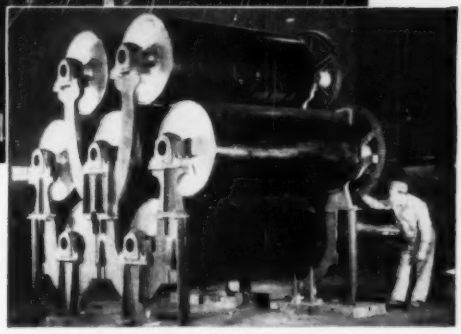
APPLETON WIRE WORKS, INC.

APPLETON, WISCONSIN

7 LUKENWELD DRIER ROLLS do the work of 10 ordinary rolls...



This drier section addition to a paperboard machine at S. Austin Bicking Paper Mfg. Co., Downingtown, Pa., packs a lot of production into a small space.



Erecting the drier section at Lukenweld.

To increase the output from one of S. Austin Bicking Paper Manufacturing Company's paperboard machines, it was estimated that ten ordinary single-shell rolls would be required. Our engineers determined that seven Lukenweld Jacketed Steel Drier Rolls would provide the desired additional drying capacity.

Lukenweld designed and built the drier section containing these seven rolls. Because fewer rolls were required, the unit takes up less plant space, the supporting structure was simplified and costs were reduced. The welded steel frame is strong and rigid, helping hold down upkeep costs.

Lukenweld Jacketed Steel Drier Rolls owe their superior performance to these properties: Narrow passages force high-speed steam circulation and positive scavenging. Being of steel plate construction, sections can be thinner, assuring rapid and uniform heat transfer. These rolls can be safely worked at high steam pressures—up to 350 psi and higher.

Manufacturers interested in increasing the output from old or new machines can obtain help from our engineers. Bulletin 358 tells you more about Lukenweld Jacketed Steel Drier Rolls; Bulletin 505 gives actual case histories on applications in various industries. For copies, write Lukenweld, Division of Lukens Steel Company, 403 Lukens Bldg., Coatesville, Pa.

LUKENS

LUKENWELD DIVISION ★

Come see us at the Metal Show in Cleveland, October 17-21, Booth 503, and the Chemical Show in New York, November 28-December 3, Booths 558-563.

DESIGNERS, ENGINEERS AND MANUFACTURERS OF MACHINERY

FOREIGN . . . . .

How Aussies Fight Fungus

PERTH—The Australian Defence Research Laboratories, in their Circular No. 12, give some interesting data regarding the fungicidal treatment of paper and adhesives:

"Little attention has been paid to the fungicidal treatment of paper, because, as a general rule, this material is only slightly affected by fungal growth. Sodium pentachlorphenate has been used in England for treating paper labels, while wrapping papers have been treated by the cuprammonium process or with copper naphthenate. Phenyl mercuric acetate is being used for the prevention of fungal growth on paper pulp, both wet and dry, during manufacture. Most paper mills in Australia are using phenyl mercuric acetate for this purpose with great success.

"Books, stored in hot wet climates, have shown considerable deterioration as a result of high humidity and, to a less extent, fungal growth. Mainly the covers and bindings of the books have been affected. Treatments recommended for use are spraying the covers, backing and bindings of the books with 0.1 percent solution of either phenyl mercuric acetate in benzine or sodium ethyl mercuric thiosalicylate in alcohol, or a one per cent solution of pentachlorphenol in alcohol. In some instances, application of these fungicides in lacquer solutions would seem more satisfactory because of the waterproofing effect of the lacquers, which also reduce the rate of loss of mercurials through volatilisation. Care should be taken in the use of lacquers, especially, to see that there is not too heavy a coat on the bindings."

In the matter of adhesives the circular says: "Glues, starch and casein adhesives and similar bonding materials are all capable of supporting growth of fungi. Most other adhesives do not support fungal growth to any extent. Synthetic resin adhesives, such as urea/formaldehyde, are reported to be resistant to fungal attack.

"Deterioration of the bonding material may result from fungal growth and may be a serious problem. The organic mercurials appear to offer the best possibilities for incorporation in adhesives to improve their resistance to fungi; the water-soluble phenyl mercuric trienthanolamine lactate is being used in size for jute twine. Because of their toxicity, mercurials should not be used in adhesives for gummed labels."

Ireland

DUBLIN—At the 22nd annual general meeting of Killeen Paper Mills, Ltd., held here on September 7, D. McCullough (chairman) presiding, said: "The statement of accounts for the year ended June 30, indicated substantial progress." From 1939 to 1949, they had almost quadrupled the amount of goods manufactured and sold per annum, and in the year under review their manufacture and sales had increased by nearly ten percent over those of the preceding year. Profits increased considerably, despite the fact that substantial reductions were made during the year in the selling price of nearly every line they made, and that wage increases were paid to workers.

An additional new machine for the manufacture of single-faced corrugated paper had been installed during the year and was in full operation.

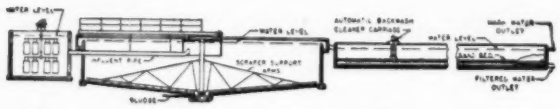
The manufacture of corrugated paper and board was an entirely new industry in the Republic of Ireland, Mr. McCullough pointed out. Its inception had been of inestimable value to the company both in the increased volume of sales and because it absorbed a considerable share of the paper they made, thus enabling them to keep their paper machines in full production.

A fire during the year almost destroyed their cutting department.

Further extensions to the mill premises, generally, to provide for ever increasing production and important additions to the plant were contemplated.

The directors were considering the

"Fer water 'n white water... best equipment made!



FLOCCULATING EQUIPMENT

Slowly rotating paddles hold solids in suspension—create optimum flocculating conditions. Usually followed by a clarifier in raw water treatment as shown in the typical water treatment flow diagram above. Bulletin 35-C-14.

AUTOMATIC BACKWASH SAND FILTERS

An entirely new type of sand filter with a traveling backwash mechanism which cleans the filter bed, automatically, without shut-down or changeover. Highly efficient in extracting fine suspended matter from paper mill water supply. Ideal for reclaiming solids from "white water," leaving the filtered water sufficiently clean for re-use on showers. Bulletin 46-14.

CLARIFIERS

In the circular model, double-spiral or cut-flight scrapers remove settled solids quickly at the tank center. The rectangular model is designed for limited spaces or where sludge delivery is desired at one end of the tank. For removal of settleable solids from waster water and mill water supply. Bulletin 35-C-14.

HARDINGE

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YORK, PENNSYLVANIA — 240 Arch St. • Main Office and Works

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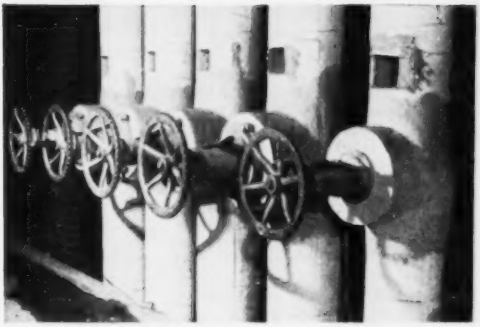
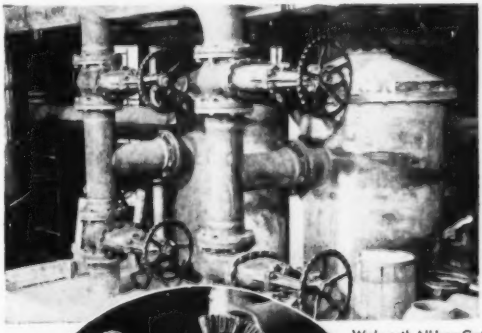
Walworth Iron Body Bronze Mounted Gate Valves (No. 726F) on steam line to paper machine.

Walworth Special Alloy Pulp Mill Gate Valves (No. 725FS) and Check Valves (No. 928FS) on liquor lines.

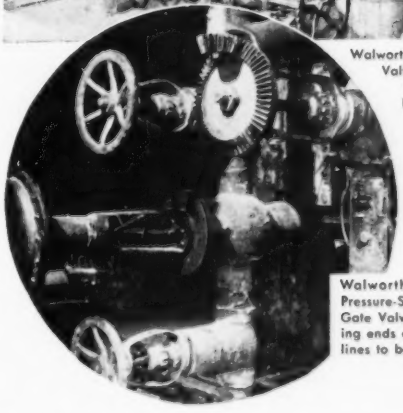


Walworth Series 900 Pressure-Seal Cast Steel Gate Valves with welding ends on main steam lines.

Walworth Extra Heavy Steeliron Gate Valves (No. 786F) and Globe Valves (No. 955F) on pressure reducing lines.



Walworth All Iron Gate Valves (No. 727F) in weak black liquor service.



Walworth Series 900 Pressure-Seal Cast Steel Gate Valves with welding ends on feed water lines to boiler.

Valves for Pulp and Paper Mill Service

Valves play an important part in the efficient operation of any pulp or paper mill. For new construction, or for maintenance, pulp and paper mill engineers are choosing the right valve for each specific service from Walworth's complete line.

Walworth manufactures valves and pipe fittings of steel, steeliron, iron, bronze, and special alloys. Illustrated are Walworth valves of latest design, installed in a variety of services in a modern pulp and paper mill.

For further information and details of Walworth's complete line of valves and fittings, see your local Walworth distributor, or write for Catalog 47.

WALWORTH

Pulp and Paper Mill Division

60 EAST 42nd ST., NEW YORK 17, N. Y.

DISTRIBUTORS IN PRINCIPAL CENTERS THROUGHOUT THE WORLD

advisability of a new capital issue to cover the necessary expenditure involved.

The company continued to handle a considerable export business, which they were always endeavoring to extend, both to Great Britain and countries further afield.

He reported a reduction in stocks and general stores from £87,904 to £28,803 11s. This reduction was made possible by the passing of the necessity for carrying large stocks of raw materials as supplies became more readily available.

This reduction in the stock position had changed their bank account position from a debit balance of £36,506 to a credit balance of £18,670.

At £49,147, the auditors were of the opinion that ample provision had been made for present and future taxation.

He regretted the continued failure of the Minister for Finance to increase the allowances for wear and tear on plant and machinery and to provide an allowance for buildings used as factories. This failure put them at a great disadvantage in competition with English mills, Mr. McCullough stated, adding that with plant and machinery increased to three times its pre-war cost, the problem of replacement was a growing one.

The directors had transferred £10,000 to buildings, plant and replacement reserve.

A dividend on the Preference shares at the rate of seven and one-half percent per annum, less income tax at 6s. 8d. in the £, less the half-year's dividend of two and three-quarters percent actual, paid to Februray 28, was declared, together with a dividend at the rate of ten percent per annum, free of tax on the Ordinary share capital for the year.

The remaining balance on the profit-and-loss acount was appropriated as follows: £1,000 to staff superannuation scheme, £8,000 in general reserve, £10,000 to a buildings, plant and machinery replacement reserve, and balance of £8,877 4s. 5d. carried forward.

* * *

In July, the Republic of Ireland imported paper and cardboard, etc., to a total value of £282,390 as against £268,995 in July, 1948. This makes a total import value of £1,872,834 for the first seven months of 1949, as against £1,934,331 in the corresponding period of 1948.

Of the July, 1949 imports, paper-making materials amounted to 1,230 tons, valued at £28,394 against only 10 tons, valued at £180 in July, 1948. Coated printing papers valued at £6,182 were imported in July, 1949, and at £6,115 in July, 1948.

Newsprint imports rose from 41,818 tons in July 1948 to £45,917 in July, 1949, the respective value being £67,449 and £83,790.

Other uncoated printing paper imported in July 1949 was valued at £9,506, the figure having fallen from £15,786 in July, 1948.

Other import figures included in the *Trade Statistics*, which have just been issued by the Central Statistics Office in Dublin are:

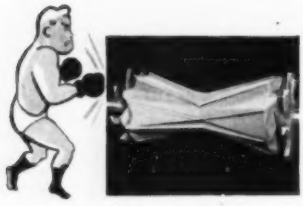
Article	July, 1949	July, 1948
Writing paper in large sheets	£4,926	£4,072
Packing and wrapping paper	£1,511	£251
Printed wall and ceiling paper	£3,926	£7,328
Empty containers and parts, of cardboard, etc.	£12,768	£8,100
Strawboard, not worked or corrugated	£5,487	£17,828
Other cardboard, etc., in the piece	£46,339	£52,343

Re-exports of paper and cardboard, etc., in July, 1949 were valued at £140 as against £335 in July, 1948.

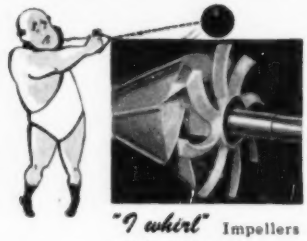
* * *

Preliminary figures of the Census of Industrial Production in the 26 Counties of Ireland which now comprise the Republic, for 1945-46, published in the *Trade Journal and Statistical Bulletin*, issued by the Central Statistics Office, disclose that the gross output of the paper making and manufactured stationery industry in 1945 was valued at £1,863,175 and in 1946, at £2,310,987. The net output per person engaged in the industry in 1945

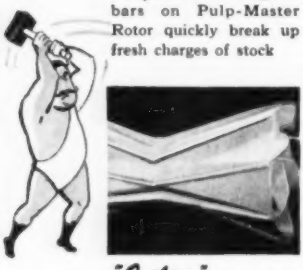
4-way PULPING POWER!



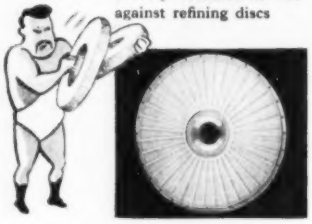
"I pound" Diagonal bars on Pulp-Master Rotor quickly break up fresh charges of stock



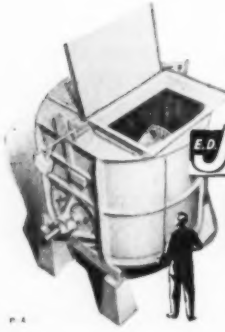
"I whirl" Impellers agitate stock until sufficiently reduced to rub against refining discs



"I slam" Cone shape of Pulp-Master Rotor forces stock violently against sides of tank



"I grind" Refining discs at sides of tank have radial bars against which stock is rubbed by impellers



Not just a swish or swirl, but a pounding, slamming, whirling, rubbing action that completely disintegrates new pulp, waste-paper, machine broke — even glassine and wet-strength — in 10 to 40 minutes.

Four sizes, from 500 to 4000 lbs., at 6½% density. Available for batch or continuous operation.

E.D. Jones

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PULP-MASTER

E. D. JONES & SONS COMPANY • PITTSFIELD, MASS.

BUILDERS OF QUALITY STOCK PREPARATION MACHINERY

was £275 and in 1946, was £303. At the end of 1945 there was a total capital of £920,497 invested in the industry, and at the end of 1946, the total capital was £4,807,363.

Philippine Abaca Fiber

WASHINGTON—A sharp drop in output of abaca fiber in the Philippines is indicated for the first seven months of 1949, the Agriculture Department reports. Fiber inspected for these months of 1949 totaled 89,800,000 pounds, compared with 112,800,000 in the same part of 1948.

The three major importers are the United States, United Kingdom and Japan. The figures this year showed that these three countries are continuing to receive between 70 and 80 percent of total Philippine abaca exports, but the position of this country has gained somewhat, while the Japanese share is again approaching its pre-war proportion, when it accounted for a major part of shipments, including grades not used in the United States.

United States shipments, while showing improvement, have in the past two years, fallen below pre-war averages.

Exports to the U. S. in 1935-39 averaged 88,260,000 pounds. In 1947 this rose to 146,845,000, but in 1948 was down to 74,225,000 pounds, and in the January-July months this year, 31,560,000 pounds.

TRAFFIC

New Newsprint Box Car

TORONTO — The Canadian Pacific Railway has received 500 new box cars equipped with strip-lading anchors to facilitate securing partial carloads of package freight and newsprint.

The anchoring device, known as the Brigadier Strap Anchor, consists of brackets placed on the inside walls of the cars, which are lined with plywood. The cup-shaped brackets are welded to steel posts and each bracket contains a spring steel tongue to which is applied the steel strap for holding goods in place. Strapping is fastened to the anchor with a clamping device.

Planning Freight Study

NEW YORK—A plan to obtain first-hand data covering carload freight shipments of goods packed in corrugated and solid fiber boxes has been agreed upon jointly by the railroads of the country and the Fibre Box Ass'n. The program will start with three inspection teams scattered over the country. It is under the general direction of L. W. North of the Official Classification Committee, 1 Park avenue, New York 16, representing the railroads, and Albert W. Luhrs, 919 Eleventh street, N. W., Washington 1, D. C., representing the Fibre Box Ass'n.

Newsprint Traveling Waterways

CHICAGO, Ill. — With an eye to economizing on freight costs, Canadian paper companies are again shipping newsprint by barge from Chicago to U. S., inland cities—a practice that stems from the war period. Previously, railroads were used for part of the journey.

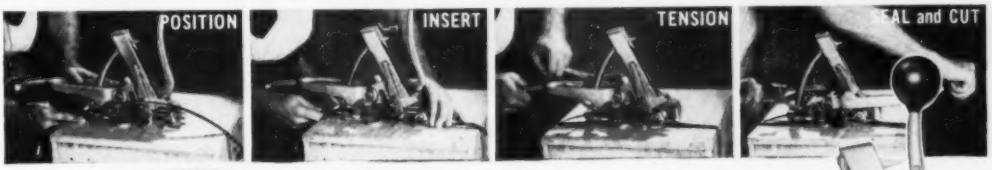
On Sept. 28, about 1,500 tons of newsprint from Bowater's Paper & Pulp Mills, Ltd., Corner Brook, N. F., was transferred from ship to barge here and was destined for a Nashville newspaper. The Canadian ship, Farrandoc, took 14 days to make the trip from Corner Brook to Chicago. The route the barge took to Nashville was through the Illinois waterway system to the Mississippi River, thence to the Ohio River to Smithland, Ky., and on to the Cumberland River to Nashville. Thus far about 4,000 tons of newsprint have been shipped from Corner Brook.

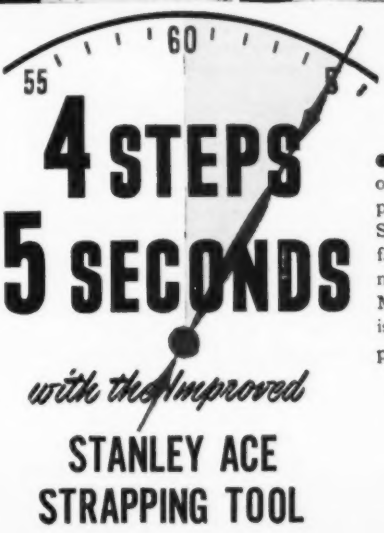
A St. Louis paper is soon to receive a shipment of newsprint by water from the Abitibi Power & Paper Co., Ltd., from Port Arthur, Ont. as an experiment.

Weighs Newsprint Water Route

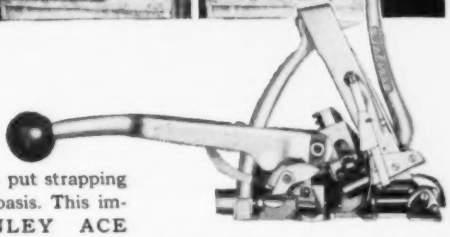
BOSTON — A New York daily newspaper is investigating the possibility of shipping newsprint paper by water, a letter reprinted in the New York, New Haven & Hartford Railroad employe's magazine reports.

Many rolls of paper, round when





4 STEPS
5 SECONDS
with the Improved
STANLEY ACE
STRAPPING TOOL



● Here's how to put strapping on a production basis. This improved STANLEY ACE STRAPPING TOOL is light — fast — simple — even a beginner can make time with it. Magazine holds 75-100 seals — is easily loaded and seals in any position. The "Ace" is made in three different sizes, to handle ⅜", ½" and ⅝" strapping.

Decide now to put the "Ace" to work for you! Write for full information or ask for demonstration.

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they leave the mill, have been flattened in transit by rail to the extent of crushing the cores.

The disadvantages of shipping newsprint via water consisted mainly of cuts and bruises to the paper, but special boats, better handling, and reduced costs have made the prospects of water shipping more attractive to the publishers, it is stated.

Improved handling of newsprint paper on the railroads could save them revenue of $180,000 a month on one customer alone. The advantages of shipping by high speed freight remain a factor that cannot be ignored by the consumer. Whether transportation revenues are to move to the shipping industries or remain with the railroads is primarily a matter of handling.

NMF Classification "Exceptions"

By Edwin Chester Hastings

PITTSBURGH — The National Motor Freight Classification, in *Rule 21*, lists a rate of $1.50 per hour per man for the use of additional labor to load or unload freight which on account of weight or dimension cannot be handled by the driver. The charge is in addition to the freight rates assessed on lading. Rates in a tariff are based on *weight* and when the shipment moves by truck the charge includes the labor of one man (the truck driver) in loading and unloading.

The shipper and/or consignee are not required to accept the additional labor furnished by the carrier; arrangements can be made to use their own labor. If this is done, the firm will have a more accurate control of handling costs on freight shipments.

The $1.50 rate of the classification isn't final, nor can one be assured that it won't be increased, due to the legal means authorized by the ICC and State Commissions. The system is very simple and is used regularly by the carriages. For example this rate of $1.50 will be increased to $2.00 by many truckers during this month.

If the rate is lower in one tariff, by what right can the trucker assess higher charges? By the use of an "exception" to the classification governing his shipments. The motor carriers have several classifications. Some of them have a national coverage, while others are restricted to a section of the country.

In the classification, the carrier will be listed with several thousand others as a "participating carrier". The tariffs, which are used to cover shipments as to rates, rules and regulations, are issued by an agent in each territory. In these tariffs and the tariffs issued by the carrier is the statement "governed by a classification" and with the governing are always the words "except as otherwise provided." The latter words are the legal means to increase or decrease ratings and rates that effect the charges paid on freight shipments.

An investigation by any firm where costs are concerned is a wise move as in this case one may expect the $1.50 rate based on classification information and find the carrier charged $2.00 legally specified in the "exceptions" of the latter's tariff.

Rule 12 of NMFC #10 lists the minimum charge for a single shipment of $1.25. Very few truckers accept this rate, most of them have made various increases starting with $1.50 and this month will boost the amounts from $1.75 to $2.60 with several hauling interstate having a minimum of $5.00.

Rule 31 of NMFC provides a table on the fee charged by the carrier from 50c on COD collections of $50, to $5.08 per $1,000. Most exception tariffs have increased the fees. While there should be an adoption of the lower scale as standard for national application, this does not imply that improvement is unnecessary, for lessons in simple short tables can be learned from the local or intrastate carrier's tariff.

Here bits of information may seem odd to the paper industry. There now is a distinct difference between a "truck" and a "standard truck", according to the definitions in the Exceptions to NMFC #10, Agent G. H. Dilla, Motor Carriers Tariff Bureau. The Exception Tariff #35-A became effective September 1 and is used by nearly 500 motor carriers in Ohio, Illinois, New York, Missouri, West Virginia, Pennsylvania, Maryland, Indiana, Michigan and Kentucky. Mr. Dilla's tariff covers two territories; that of Central Freight Ass'n., and

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Trunk Line. States in this area are: Illinois, Indiana, Iowa, Kentucky, Michigan, Missouri, New York, Ohio, Pennsylvania, West Virginia, Wisconsin, Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Jersey, North Carolina, Rhode Island, Vermont and Virginia.

Many strange things are found in tariffs, but these definitions are really "exceptions." The tariff states, *"The term "truck" means any single load-carrying vehicle, propelled or drawn by mechanical power and used upon the highways in the transportation of property*

There is nothing new nor remarkable in the above quotation; it merely gives a general description which is of common knowledge. When contrasted with the other and the reason for the two, it may be difficult to comprehend. If the following is needed, then it should be combined with the above. The tariff states: *"The term "Standard Truck" means a truck having inside dimensions of height, width and length in accordance with the provisions of the following table."* (table with the item).

Most of the ratings on paper in this agent's exceptions are on a par with those of other eastern territories, that is, less-than-truckload, 55 percent of the first class rate, and truckload 27½ percent. Rates on a few paper articles are higher than the above. The required minimum truckload weight is 20,000 pounds.

In *Supplement 3*, effective September 19, the truckload rating on newsprint paper will be broadened to apply anywhere in the two territories. Previously there was a restricted application.

The same ratings apply in the *Exception to NMFC issued by the Niagara Frontier Tariff Bureau, Agent W. G. Clayton, tariffs #62 and 63-A.* There are 121 motor carriers in the three states of New York (western part), Pennsylvania (western part) and West Virginia (northern part) that use No. 62 to govern shipments. The required weight is higher than the above, being 23,000 pounds minimum on truckloads.

Rail

Box Material, Fibreboard or Pulpboard: Provision has been made for this commodity when shipped by rail, for a low rating of Class 27½J (this is 27½ percent of the first class rate). The rating was effective Septem 15, and may be noted in Agent B. T. Jones' Class Rate Tariff #544-C, Supplement 88, new item 1442. Application of the rating is *between* points in Michigan, Ohio, West Virginia, New York (Western) and Pennsylvania (Western), and Colorado, Iowa, Kansas, Michigan (upper peninsula), Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Wisconsin and Wyoming. The material when shipped flat requires a minimum weight of 36,000 pounds in carloads.

Pulpboard Dishes, Plates or Trays: Previously these commodities were shipped by rail under a Sixth-Class rate, in carload lots. It is important to note the recent change in the required weight in order to realize savings in freight charges. The shipper is required to have 36,000 pounds minimum weight in order to apply the low rate (27½ percent of the first class rate). If the weight is under this requirement, the rating on 24,000 pounds minimum is Class 5 (35 percent) and the latter is subject to the conditions of Rule 34 of the Official Classification. The change, now in effect, may be noted in Agent C. W. Boin's Tariff 90-K, Trunk Line Exceptions to the Official Classification, Supplement 120, Item 5870-D. Application is on shipments moving within the East and those shipped from other sections of the country to any point within Trunk Line Territory.

Paper Articles—Cards: The Coordinated Motor Freight Classification #5 governs shipments handled by 1,100 carriers in the New England States. In Supplement 2 to the tariff recent changes now in effect are important to note. The item had a Class 3 (70 percent of the first class rate) rating on *embossed, lithographed or printed, wrapped or in boxes.* This has been

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MUSIC	FILE FOLDER
POSTER	TAG
BOND	COATED
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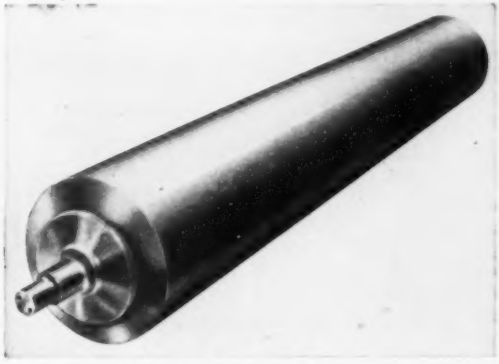

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PRODUCTION: Modern production facilities for large and small rolls of all types in metal, wood, and rubber covered.

ENGINEERING: McBride engineers work with you to solve individual roll problems, then supervise production to assure rolls that meet your exact needs.

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Table Rolls	Couch Rolls	Stainless Steel Rolls
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ROLLS OF ALL TYPES FOR EVERY PURPOSE

AMERICAN PAPER AND PULP ASSOCIATION'S PRODUCTION RATIO REPORT*

(Production as per cent of six-day capacity)

COMPARATIVE WEEKLY SUMMARIES

Current Weeks—1949		Corresponding Weeks—1948	
Aug. 20	89.9	Aug. 21	97.7
Aug. 27	90.9	Aug. 28	95.2
Sept. 3	89.9	Sept. 4	94.8
Sept. 10	74.1	Sept. 11	78.1
Sept. 17 (Revised)	94.6	Sept. 18	97.5
Sept. 24	96.0	Sept. 25	99.8

COMPARATIVE MONTHLY SUMMARIES

1948				1949	
Jan.	100.1	May	100.5	Jan.	94.6
Feb.	99.8	June	95.7	Feb.	92.8
Mar.	100.8	July	85.3	Mar.	89.1
Apr.	100.8	Aug.	96.8	Apr.	85.1
		Sept.	91.8	May	82.7
		Oct.	99.1	June	78.6
		Nov.	97.1	July	172.2‡
		Dec.	87.1	Aug.	188.0
		Year Avg.	96.2		

‡ Preliminary.

COMPARATIVE YEARLY SUMMARIES

	1942	1943	1944	1945	1946	1947	1948	1949
Year to Date	92.2	88.1	87.8	88.8	100.0	103.4	96.8	86.0
Year Average	90.4	87.8	88.1	89.4	101.1	104.3	96.2	

PAPERBOARD OPERATING RATIOS†

Current Weeks—1949		Corresponding Weeks—1948	
Aug. 20	87	Aug. 21	93
Aug. 27	86	Aug. 28	93
Sept. 3	89	Sept. 4	91
Sept. 10	72	Sept. 11	76
Sept. 17	92	Sept. 18	92
Sept. 24	91	Sept. 25	94

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1948	99	100	102	102	100	94	81	92	91	96	94	84	95
1949	88	85	79	79	78	75	64	86					

* All of the above data is based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available. Does not include mills producing newsprint exclusively.

† Per cents of operation based on "Inch-Hours" reported to the National Paperboard Association.

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with a **SMITH & WINCHESTER MODEL "E"**

UNDERCUT TRIMMER

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Paper Making Machinery
Bag machinery for single and multi-wall bags of pasted and sewed valve type
Rotary Spot Cutters, hand or automatically controlled
Shower Pipes.

YOUR investment in finished stock is large, particularly just before the trimming operation. Rejects and spoiled work resulting from faulty or inaccurate trimming are costly. Protect this investment with Smith & Winchester Model "E" Trimmers designed to meet today's needs for fast production, hairline accuracy and safety. Look into all the new features of the Model "E" Trimmer. ***Write for Bulletin!***

THE SMITH & WINCHESTER *Manufacturing Company*
SOUTH WINDHAM, CONN.

SERVING THE PAPER INDUSTRY SINCE 1845

decreased to Class 4 (50 percent). The Classification requires that the *wrapping* must be not less than one thickness of singlefaced corrugated paper made of two sheets having basis weight or not less than 70 pounds each and combined paper testing not less than 80 pounds. A new item provides for *Wrappers or Sleeves* for packing, fibreboard, paper or woodpulp, shipped nested solid, flat, knocked-down, corrugated, in packages. The ratings is Class 1 (100 percent).

Louisiana PSC Pulpwood Ruling

The Louisiana Public Service Commission has denied an increase for freight rates on pulpwood moving by rail within the state. The Commission did grant an increase of eight percent to the railroads operating in the state on intrastate freight rates and charges. This is the level authorized interstate by the ICC in Western Territory. Eight percent increase will apply to all other paper commodities. The common carriers had requested the higher southern territory increase, that of ten percent for the area of the state east of the Mississippi River which lies in southern territory. The Commission made the eight percent uniform throughout the state, refusing to recognize the Mississippi as dividing the state into rate territories.

OBITUARIES

John R. Demarest, 69, a director of the Wesley B. Meyer Co., Orange, Conn., paper box manufacturer, died at his home in that city on September 26. Mr. Demarest was identified with several other business enterprises, also, and was active in various civic affairs. A brother, Charles, survives him.

Frank D. Cowdery, secretary of the Albany Felt Co., Albany, N. Y., died at his home on September 1, following a protracted illness. Mr. Cowdery became associated with the firm in 1920. His widow survives him.

Walter Ryan, Jr., 62, sales representative of the Millcraft Paper Co., Cleveland, died in a hospital in that city on September 26. Mr. Ryan is survived by his widow, a sister and two brothers.

Moses Laque, a paper maker at the APW Products Co., Inc., Albany, N. Y., for 30 years, died at his home in that city on September 25.

AWARDS

Navy Awards Made

Inv. No. 5228—Fibreboard sheets and fibreboard boxes, to:

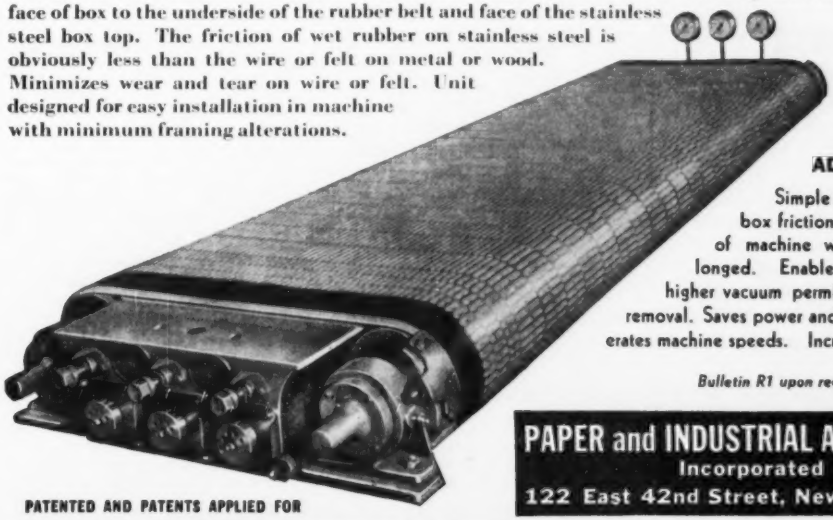
Connelly Containers, Philadelphia—293,300 Fiberboard Sheets and Boxes (corrugated) (various) @ $.0195 to $.42. (N140s—13299B)—1% 10 days.

National Container Corp. of Cal., Oakland, Cal.—353,400 Fiberboard Sheets and Boxes (corrugated) (various) from: $28.95 per M to $387.20. (NOTE: Remaining purchases, small amounts).

EVANS' ROTABELT SUCTION UNIT

for WIRES, FELTS *and all Suction Purposes on* PAPER *and* BOARD *Machines*

Highest efficiency in water removal on all types of paper, pulp or board machines. The Rotabelt operates under wires or felt on board or paper machines, conforming to same speed. Provides a proved means of increasing wire and felt life. The Rotabelt carries the wire or felt over the suction, thereby transferring friction of wire or felt against the face of box to the underside of the rubber belt and face of the stainless steel box top. The friction of wet rubber on stainless steel is obviously less than the wire or felt on metal or wood. Minimizes wear and tear on wire or felt. Unit designed for easy installation in machine with minimum framing alterations.



ADVANTAGES

Simple design. Suction box friction eliminated. Life of machine wire or felt prolonged. Enables maintaining a higher vacuum permitting more water removal. Saves power and steam. Accelerates machine speeds. Increases output.

Bulletin R1 upon request

PAPER and INDUSTRIAL APPLIANCES
Incorporated
122 East 42nd Street, New York, N. Y.

PATENTED AND PATENTS APPLIED FOR

EASY TO KEEP CLEAN!
With Blaw-Knox Grating, that's a cinch because it's practically *self-cleaning*. No sharp corners, no crevices to clog with dirt . . . and remember—
★ It's one-piece electroforged steel construction
★ The twisted bar provides safe footing at all times
★ Has maximum open area for light and air
★ Economical and easy to install whatever your grating needs
Send for FREE paper-weight-size sample.
BLAW-KNOX DIVISION
OF BLAW-KNOX COMPANY
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PITTSBURGH 22, PA.
BLAW-KNOX
GRATING

CLEARING HOUSE

HELP WANTED

ENGINEER

MECHANICAL OR CHEMICAL ENGINEER, COLLEGE GRADUATE TO ASSIST IN OPERATION OF BY-PRODUCT CHEMICAL PLANT. BETWEEN 35 AND 40 YEARS OF AGE WITH AT LEAST TEN YEARS PRACTICAL EXPERIENCE. MUST BE CAPABLE OF SUPERVISING ALL PLANT MAINTENANCE AND INSTALLATION OF NEW EQUIPMENT. EXPERIENCE IN OPERATION OF EVAPORATORS ESSENTIAL. EXCELLENT OPPORTUNITY FOR ADVANCEMENT. GIVE COMPLETE DETAILS INCLUDING AGE, EDUCATION EXPERIENCE AND SALARY EXPECTED.

Address: Box 49-485
Care Paper Trade Journal
O-13

MALE HELP WANTED — MACHINE TENDERS, and PERFORATOR OPERATORS. ATTRACTIVE WAGES, PERMANENT POSITIONS, NO LABOR TROUBLE. MILL LOCATED IN NEW ENGLAND. ADDRESS REPLIES TO BOX 49-480, CARE PAPER TRADE JOURNAL. O-13

HELP WANTED

Opportunity for college graduate in small paper mill located in Eastern Pennsylvania ad process supervisor. Box No. 49-468, care Paper Trade Journal. O-13

MILL MANAGER

FOLDING BOXBOARD MILL LOCATED IN THE EAST HAS AN EXCEPTIONAL OPENING FOR A MAN OF UNUSUAL AEILITY. GOOD EDUCATION, PRACTICAL EXPERIENCE AND THE FACULTY FOR GOOD ORGANIZATION ARE OF UTMOST IMPORTANCE.

UNUSUALLY ATTRACTIVE COMPENSATION, INVOLVING FIVE-FIGURE SALARY PLUS PROFIT PARTICIPATION, AND FUTURE OPPORTUNITY ASSURED A MAN POSSESSING THE QUALIFICATIONS WE DESIRE.

REPLY IN COMPLETE DETAIL INCLUDING AGE, BACKGROUND AND SALARY EXPECTED. Address Box 49-467, care Paper Trade Journal. O-13

HELP WANTED

CHEMIST

GRADUATE CHEMIST ABOUT 30 YEARS OF AGE WITH AT LEAST FIVE YEARS LABORATORY EXPERIENCE FOR RESEARCH AND PLANT CONTROL WORK IN BY-PRODUCT CHEMICAL PLANT. CHEMIST WITH EXPERIENCE IN LIGNIN RESEARCH WILL BE GIVEN PREFERENCE. GIVE COMPLETE DETAILS INCLUDING AGE, EDUCATION, EXPERIENCE AND SALARY EXPECTED.

ADDRESS: BOX 49-479
CARE PAPER TRADE JOURNAL
O-13

WANTED
CONVERTING SUPERVISOR

Familiar with all phases of converting toilet tissue, towels, napkins, sheeting, slitting, and cutting. N.E. Location. Full resume please. Box No. 49-444 care Paper Trade Journal. O-6

SALARIED POSITIONS $3,500—$35,000

If you are considering a new connection communicate with the undersigned. We offer the original personal employment service (39 years recognized standing and reputation). The procedure, of highest ethical standards, is individualized to your personal requirements and develops overtures without initiative on your part. Your identity covered and present position protected. Send only name and address for details.

R. W. BIXBY, INC.
117 Dun Bldg., Buffalo 2, N. Y.
TF

WANTED

First class Paper Mill Superintendent for two machine mill.
Must have experience on straight Fourdrinier and Cylinder machines.
Also experience using old paper stock, making Kraft Papers, Corrugated Material, Boxboard specialties, etc.
Address all replies to.

James J. (Shorty) Andrews
Wallcomsac Paper Mills, Inc.
P.O. North Hoosick, New York TF

WANTED — MASTER MECHANIC: — Excellent opportunity for aggressive man having full knowledge of paper mill maintenance and experienced in handling men to obtain best results in maintenance and in keeping employees satisfied. We would like to hear from any man who feels that he would qualify. Please address Box 49-474 care Paper Trade Journal, giving full and complete information regarding experience, education, age, etc. O-13

WANTED—TOUR BOSS:—Are you a capable Tour Boss? Can you produce quantity and quality? If you can, we have just the job for you. Give full detailed information regarding your past experience and tell us why you think you qualify. Address Box 49-475 care Paper Trade Journal. O-13

HELP WANTED

MEN WANTED
Positions Open

General superintendent large pulp and paper mill; superintendent for shoe board, wet machine plant; sulphite mill superintendent; quality control man, preferably technical graduate; two master mechanics; mechanical engineer especially good in electrical engineering; machine tenders and back tenders. We invite correspondence (confidential) with mills seeking executives and with executives seeking new positions.

CHARLES P. RAYMOND SERVICE, Inc.
294 Washington Street, Boston, Mass. O-6

EASTERN BOARD & CARTON PLANT wants man for order and traffic department, with some experience in handling truck and rail shipments. Address Box 49-483 care Paper Trade Journal. O-6

SITUATIONS WANTED

CHEMIST—15 years Chief Chemist paper mill. Experienced color work, past four years resin research. Seeks new connection, laboratory or sales. Address Box 49-440 care Paper Trade Journal. O-6

CHEMIST — Veteran, 29, good personality, wants position plant chemist, product development and sales. Address Box 49-437 care Paper Trade Journal. O-6

PLANT ENGINEER or Master Mechanic—Practical experience in preventive maintenance of power and mill equipment in both Fourdrinier and cylinder mills. Excellent reference. Age 40 years. Address Box 49-445 care Paper Trade Journal. O-6

PAPER MAKER and Mechanic—Vast amount of experience, installing operating and maintaining cylinder and Fourdrinier machines and its auxiliary equipment. Excellent health. References. Address Box 49-448 care Paper Trade Journal. O-6

Desire position as ASSISTANT to PRESIDENT or MILL MANAGER or Technical Superintendent. College man, age 37. Excellent technical and production experience in board—pulp—mill, converting, cost-quality control, research and development. Now employed. Replies held confidential. Address Box 49-443 care Paper Trade Journal. O-6

SUPERINTENDENT—Fourdrinier or cylinder mill. High grade box board Kraft Specialties, 009 corrugating, Sulphite and groundwood specialties. Cost and quality conscious. Age 40. Excellent references. Address Box 49-446 care Paper Trade Journal. O-6

ENGINEERING DRAFTSMAN — 10 years experience in the Kraft and Sulphite paper industry, desires change, something with a future. Experience consists of layout and design, installation supervision, coordination and maintenance. Now employed. Address Box 49-476 care Paper Trade Journal. O-6

FOR SALE

FOR SALE

Long established and successful paper converting business. Owner retiring on account of age. For full particulars address Box #49-477 care Paper Trade Journal. O-6

FOR SALE—Four color aniline press with sheeter and a four roll parent roll stand. Particularly adapted to production of fruit wraps. Priced for immediate sale. Address Box 49-456 care Paper Trade Journal. O-6

A headache no aspirin can cure.....

Would a few more tons of production per day put you more comfortably "in the money"? If the answer is "yes", and of course it is, what's holding you back? Is it an antiquated wet end? Is it inadequate drying capacity?

If your trouble can be traced to either of those two quite common causes, or to others that might be named, the corrective is within your reach.

It doesn't take too great an outlay to rebuild a vat section or Fourdrinier, spruce up a press or enlarge a dryer section. Those things can be figured to the penny.

What cannot be computed is the flight of business due to unfavorable conversion costs, the hazards of being underquoted in the market.

Consult Black-Clawson on plans and estimates. No obligation.

The BLACK-CLAWSON COMPANY, Hamilton, Ohio

Divisions: SHARTLE BROS. MACHINE CO., MIDDLETOWN, OHIO
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Western Sales Office: Mayer Building, Portland, Oregon
Associate: Alexander Flock Limited, Ottawa, Ontario, Canada
Subsidiary: B-C International, Ltd., 16 Catherine Place, Victoria, London S.W.1, England

FOR SALE

6—Paper Machine Drives, 75 h. p., ratio 8 to 1. All enclosed, with automatic clutches.

A-1 condition.

J. J. ROSS COMPANY

250 Frelinghuysen Ave., Newark, N. J.
Telephone Bigelow 3-3720

O-6

FOR SALE

FOR SALE

3—Pusey & Jones Deckers. Cylinder molds 42" diameter x 146" face, iron end vats, anti friction bearings, 18" rubber covered couch rolls.

J. J. ROSS COMPANY

250 Frelinghuysen Ave., Newark, N. J.
Telephone Bigelow—3-3720

O-6

FOR SALE

FOR SALE

New Lockport 27" 4 color Aniline Press. Reasonably priced.

ROSS PAPER MACHINERY COMPANY
265 Passaic Street Newark, N. J.
Tel. HUmboldt 2-2177 O-6

PAPER COATING MACHINERY MANUFACTURERS — Waxing, Oiling, Carbon, Laboratory Coating and Treating Machines. New improvement. MAYER MACHINE COMPANY, Inc., 1313 Buffalo Road, Rochester 11, N. Y. TF

FOR SALE—New 64" Maier Rotary Cut-Off Knife; 100" New Knowlton Bar Creaser. GREGGORY, INC., 203 N. Wabash Ave., Chicago, 1, Ill. O-6

FOR SALE

1—Plain Extractor Roll 28" diameter x 150" face.
1—Suction Extractor Roll 22" diameter x 150" face, complete with L-7 Nash Vacuum Pump.

BARKERS
1—5' Carthage Disc Barker

BEATERS
1—800 lb Beater—iron tub

BEATERS (Laboratory)
2—Dilts Iron Tub Laboratory Beaters. Beater rolls 14" diameter x 10⅛" face, including motors.

BRASS FELT ROLLS
9—4" diameter x 140" face (with bearings)

BREAST ROLLS
1—100" x 14".
8—114" x 14".
1—120" x 14".

CALENDER STACKS
1—72" 5 roll Calendar Stack.
1—76" 7 roll calender stack (heavy duty).

CHIPPERS
2—96" Murray 4 knife Chippers.

CRUSHER & HAMMERMILL
1—Murray Chip Crusher.
1—Jeffrey Hammermill.

CYLINDER MOULDS
1—36" diameter x 80" face.
1—30" diameter x 72" face.
1—36" diameter x 79" face.

DECKERS
1—Decker—48" diameter x 84" cylinder mold
3—Pusey & Jones Deckers Cylinder molds 42 x 146, anti friction bearings, including rubber covered couch rolls.

DRIVES
2—#4 Reeves Drives.
1—#2 Reeves Drive.
1—Smith & Winchester mortise gear Drive.
1—Foote—7½ h.p. Speed Reducer (Ratio 240 to 1)
2—Smith & Winchester Mortise Gear Drives with 26" diameter clutches—Ratio 8 to 1
6—Enclosed drives. 75 h.p., ratio 8 to 1. Complete.

DRIVES (Angle)
1—General Machine Company 16 : 1.
1—Philadelphia 30:1 — 1 h.p. — 1200 r.p.m.
1—Philadelphia 21½:1 — 3 h.p. — 1200 r.p.m.

V-BELT DRIVE
1—21½" diameter x 7½" face, 5 groove.
1—16½" diameter x 7½" face, 5 groove. (With clutch).

DRYERS
1—48 x 70.
14—48" diameter x 112 face.
30—36" diameter x 102" face.
50—42" diameter x 126" face.
9—36" diameter x 72½" face, with gears and bearings.
1—48" diameter x 91" face.
2—25" x 120" (Baby Dryers).
2—36" x 143".
1—24" x 130".
1—60" diameter x 47" face.

EMBOSSER
1—84" Hudson Sharp Toilet Embosser. Spare engraved roll.

FELT ROLLS
20 Felt Rolls—Brass covered 8" to 12" diameter.

FILTERS
3—IMPCO Lime Sludge Filters.

FLAT SCREENS
1—6 plate Shartle Flat Screen
1—8 plate Packer Type Flat Screen.
2—12 Plate Murray Dunbar Flat Screens.
2—14 plate Sandy Hill. (Never used.)

FRICTION CALENDERS
2—30" Waldron.
2—38" Waldron.

HYDRAULIC PRESS
1—Watson-Stillman Co. (Platen 24" x 24").

JORDANS
2—Noble and Wood—Mammoth Type
1—Emerson Jordan—25 to 30 tons capacity—iron plug including new spare iron plug.

MISCELLANEOUS
1—Caustic Mixer.

MOTORS
2—5 h.p. ball bearing—splash proof motors—3/60/440. 1160 r.p.m.
1—¼ h.p. ball bearing—splash proof gear-head motor—3/60/440. 1725 r.p.m.
1—2 h.p. ball bearing—splash proof gearhead motor—3/60/440. 1725 r.p.m.

PRESSES
4 Sections of presses approximately 24" diameter. Rubber and Bronze.

PRESS ROLLS
Various sizes.

PRINTING MACHINE
1—3 color 40" Rotary Cottrell Printing Machine, A-1 condition, provision for 2 more colors.

PULLEYS
Various cone and assorted pulleys.

PULPERS
1—Jones Pulper. Complete with motor and drive.
1—Noble & Wood Pulper—Iron Tub.

PUMPS
2—Weil Pump Co.—100 g.p.m.—100 P.S.I. including 15 h.p. motors (new equipment).
1—Bell & Gossett—300 g.p.m.—120' head—including 15 h.p. motor.
1—Goulds Sump Pump—50 g.p.m.—20' head—including motor.
Various sizes of Centrifugal and Plunger Pumps. Write us regarding your particular requirements.

REEL
1—72" Beloit Reel.

ROLLS
100—Brass tube-steel tube—rubber covered iron rolls—various sizes.

SAVEALLS
1—#5 Bird Saveall.
1—Saveall—48" diameter x 84" cylinder mold.
3—Pusey & Jones Savealls. Cylinder molds 42 x 146, anti friction bearings, including rubber covered couch rolls.

SCREEN PLATES
20 Plates cut .016.
10 Plates cut .008.
Also other sizes and cuts in stock.

SHEETER
1—136" Moore & White Sheeter, duplex, with layboy.

SLITTERS AND WINDERS
1—72" Cameron—Type 28-8-7-D (shear cut).
1—62" Cameron—Type 10-10-AJ.
1—50" Cameron—Type 24-2L.
1—48" Cameron—Type 40-4-B.
1—42" Cameron—Type 24-2A.
1—42" Cameron—Type 9-S.
1—42" Cameron Constant Tension, with pneumatic control.
1—30" Langston.
1—62" Cameron—Type 6 (Shear cut).
1—115" 2 drum Waldron

SQUEEZE ROLL
1—Rubber Squeeze Rolls, 20¾" diameter x 102" face.

STOCK PUMPS
1—10 x 20 Shartle Duplex.
2—7 x 16 Sartle Duplex.
Numerous other Centrifugal Stock Pumps Advise us to your requirements.

SUCTION BOXES
5—Suction Boxes, 82" drilled face x 6" wide.

SUCTION COUCH ROLL
1—24⅞" diameter x 160" drilled face.
1—Sandusky 14⅞" diameter x 103" drilled face.

SUCTION PRESS ROLL SHELL (Only)
1—29¾" diameter x 134" drilled face.

SUPERCALENDER STACK
1—54" 9 roll supercalender stack, completely rebuilt including motors, etc.

TABLE ROLLS
40—Table Rolls 82" face x 3" diameter.

TOILET and TOWEL MACHINES
2—Dietz 81" Toilet & Towel Machines.

TRIMMER
1—56" Smith & Winchester—Undercut.

TUNNEL DRYERS
2—Proctor & Schwartz Tunnel Dryers, 10 ton and 5 ton capacity.

TURBINE
1—150 h.p. Westinghouse Type C Gear Turbine (Recently rebuilt).

VACUUM PUMPS
2—H7 Nash Vacuum Pumps.
1—#4 Nash Hytor Vacuum Pump.
1—L5 Nash Vacuum Pump.
1—L-7 Nash Vacuum Pump

VAT
1—Iron end Vat only, for decker or saveall, suitable for cylinder mold 36 x 130.

YANKEE DRYERS
1—8' diameter x 175" face

We are always in the market to purchase your surplus or idle machinery. What have you to offer?
Wanted Cylinder and Fourdrinier Machines (complete mills).

Paddy Ross, Pres. **J. J. ROSS COMPANY** Ben Kurs, Treas.

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CONVERTING
PAPER MAKING EQUIPMENT

NEW, USED, REBUILT
PAPER AND PULP MACHINERY

1—Pusey & Jones 120" Ball Bearing Fourdrinier Paper Machine. 60" diameter dryers—suction press and suction couch—Spiral Bevel Gear Drives.
1—Pusey & Jones 82" Fourdrinier Machine Complete.
1—7 cylinder 120" Board Machine, 82 Dryers, 42" diameter. Complete with all auxiliaries.
1—6 cylinder 132" Board Machine, 67 Dryers, 42" diameter. Complete with all auxiliaries.

HEATERS
2—Valley Iron 750 lb. Iron Tub—Bronze Filed.

BLOWERS
8—Blowers and Mill Exhausters

CALENDER ROLLS
84 Chilled Iron Rolls—Assorted sizes.

CALENDER STACKS
1—104" face 5 roll stack, with drive
1—76" face 7 roll with drive.
1—76" face 3 roll with drive.
1—112" face 7 roll.
1—82" face 5 roll Sandy Hill.

CONVEYOR
1—18½ ft long x 30" wide—with motor.

COUCH ROLLS—BRASS
1—104" face x 17" dia.
1—118" face x 18" dia.
1—150" face x 18" dia.
1—82" face x 19¼" diameter.
2—94" face x 21¾" diameter.

COUCH ROLLS—RUBBER
1—110" face x 20" dia.—New.
1—138" face x 19" dia.

CYLINDER MOLDS
8—IMPCO 48" diameter x 84" face.
1—36" diameter x 136" face Cylinder molds with vats, couches—ball bearing.
2—74" face x 36" diameter.
1—134" face x 36" diameter, with stainless steel shafts.
1—78" face x 38" diameter.

DRIVES
1—8C. Reeves Drive. 40-50 h.p.—Ratio 4 to 1.
1—Cleveland 50 h.p. Ratio 10 to 1. Right angle.
1—De Laval 65 h.p. Ratio 2.24 to 1.—616 r.p.m.
1—Falk 60 h.p. Ratio 13 to 1, R.p.m. 1470-113. Herringbone gears.

DRYERS
4—74" face x 28" diameter with gears.
5—143" face x 48" diameter.
6—124" face x 48" diameter.
4—80" face x 36" diameter.
1—77" face x 48" diameter—with gear.
1—64" face x 36" diameter.
18—78" face x 36" diameter, complete with 2 deck frames, gears, bearings and steam joints. Drives, line shaft and felt rolls are available.
1—78" face x 18" diameter with gears and bearings.
1—120" face x 16" diameter—Baby Dryer.
3—63¼" face—36" diameter—bearings and gears.
5—98" face x 48" diameter.
95—126" face x 42" diameter.

EXTRACTOR ROLLS—SUCTION
1—Downingtown—54" face x 17" diameter with bearings & stand.

FLAT SCREENS
5—10 plate Sandy Hill.
1—Sandy Hill 5 plate—with scraper.
1—New Sandy Hill 12 plate, with scrapers and V-belt drive.
1—Montague 6 plate—ball bearing.

FOURDRINIER SECTIONS
1—P & J 156" x 90 ft. ball bearing. Complete from inlet to 22" diameter suction couch. Brass and Rubber covered table rolls. 6 Brass Suction Boxes operated at 1000' per minute.
1—M & W 82" x 49' complete with 3 suction boxes, shake, 3 suction presses and size press.

HAMMERMILLS
1—American Hammermill—37" anti friction bearing sectional.

HEAD BOXES
1—118" Bronze Lead Lined, Bevolt.

INLETS
1—Voith Inlet for 181" wire with 28" slice. Complete, including drive.
1—90" All bronze—adjustable.
1—141" Beloit complete with distributor roll.

JORDANS
2—#2 Miami Ball Bearing with spare plugs.
2—Jones Standard, with motor bases and coupplings.
1—Jones Standard—ball bearing direct connected to 150 h.p. G.E. 440 volt motor.
1—#3 Miami, for motor drive.
1—Jones Majestic, roller bearing—stainless steel fitting—for motor drive.
6—Jones Majestics with base and couplings—bronze filled, 2 sets of new bronze fittings.
3—#3 Appleton with base and coupling—bronze filled.
1—Dillon Horse #2—direct connected 75 h.p. Stainless steel ¼" filling.
1—#4 Smith & Winchester—Ball bearing.

LABORATORY EQUIPMENT
1—Cavagnaro 2 roll 12" calender Steam fitted rolls.
1—16" Coating Machine.

MOTORS
1—Fairbanks Morse — 50 h.p. — 498 r.p.m. — 220/440/550.
1—Reliance 25 h.p. ball bearing, 550 v., 3 phase, 60 cycle—1750 r.p.m.
1—General Electric 150 h.p.—440 v.—3 phase—60 cycle—690 r.p.m.
1—General Electric 200 h.p. induction, 440 v. 3 ph. 60 cyc. 380 r.p.m. with GE starter.
1—General Electric 350 h.p. synchronous type TS 440 v. 3 ph. 60 cyc. 400 r.p.m. with exciter GE starting panel.

PRESS ROLLS
1—110" face x 13" diameter—rubber.
1—110" face x 16½" diameter—rubber.
1—123½" face x 17½" diameter—rubber.
1—112" face x 18" diameter—rubber.
1—127" face x 17½" diameter—brass.
1—117" face x 24" dia.—Brass.
1—84" face x 20" dia.—Rubber.
1—109" face x 22" dia.—Rubber.
2—118" face x 21" dia.—Rubber.
1—147" face x 11⅝" dia.—Rubber.
1—74" face x 18" diameter—Rubber.
1—109" face x 17" diameter—Rubber.
1—102" face x 16" diameter—Rubber.
1—119" face x 17" diameter—Brass.
1—78" face x 18" diameter—Brass.
1—83" face x 14" diameter—Brass.
1—53" face x 12" diameter—Iron.
1—85" face x 19" diameter—Iron.
1—74" face x 18" diameter—Iron.
1—73" face x 14" diameter—Iron.
1—102" face x 18" diameter—Brass.

PULLEYS
30—Split cast iron tapered Pulleys.

PULP EQUIPMENT
1—Jigger—1 deck—vibrating screen.
1—Mitts & Merrill #17 Pulpwood chipper.
1—8' Carthage Disc Barker
1—60" Carthage Ball Bearing Chipper—4 knife.

PULPERS
2—#2 Lamoyo Pulpers—with drives.

PUMPS
44—Centrifugal Pumps. Direct connected. Belt Driven. Extended base for motor. Assorted capacities and heads. Most used less than one year.

PUMPS—OPEN IMPELLER
1—Morris open impeller—9" suction—5" discharge—belt driven.
1—Morris Vertical Open Impeller 8 x 6—500 g.p.m. 3 percent stock—60' head—connected to G.E. 15 h. p. 220-440 volt 3 phase—48 cycle—1165 r.p.m.
1—New Gould—ball bearing—8" suction—4" discharge—790 g.p.m.—60' head. Requires 20 h.p. at 1750 r.p.m.
1—New Gould—ball bearing—6" suction—6" discharge—1500 g.p.m.—40' head. Requires 25 h.p. at 1150 r.p.m.
1—New Goulds—ball bearing—8" suction—5" discharge—1200 g.p.m.—60' head. Requires 30 h.p. at 1150 r.p.m.
1—New Gould—ball bearing—8" suction—6" discharge—1500 g.p.m. 40' head. Requires 20 h.p. at 1150 r.p.m.
1—New Gould 8" suction 4" discharge 500 g.p.m. 40" head. Requires 15 h.p. at 1750 r.p.m.
1—Warren—10 x 6, 1000 g.p.m.—30' head—Belt driven.
1—De Laval 6 x 6, 250 g.p.m. 30' head—for motor drive.
1—De Laval—6 x 6, 500 g.p.m. 30' head—for motor drive.

REELS
2—Beloit 110" two bowl Reel.
1—Beloit 132" two bowl upright reel.
1—Beloit 110" two bowl upright reel.

ROLLS
2—18" diameter x 120" face with ball bearings and stands. Bored for steam.
250—Brass, Steel Rolls, Assorted sizes.

ROTARY SCREENS
2—Jones Leithwalk—cylinder 84" face x 28" diameter.
1—#2 Leith-walk-ball bearing.
1—#3A Bird with motor. Used less than 1 year.

SCREW PRESSES
3—Valley Voith Screw Presses Size 2A, with new spare sets of plates.

SHEETERS
1—Hamblet 51" Single Knife with 6 roll back stands and motors.
1—Beloit Duplex 104", complete with drives.
1—Hamblet Duplex—136".
1—Moore & White 64" Sheeter with Moore & White layboys.
1—12 roll Hamblet heavy duty backstand.
1—8 roll heavy duty with backstand.

SHREDDERS
2—Sorvel Waldron Cutters — type F-11 — 30" knives. Used 30 days.

SLITTERS & WINDERS
2—Pusey & Jones 100" high speed slitters and rewinders.
1—42" Cameron Model 6, with 15 slitters.
1—New 50" Cameron Model 6.
1—Beloit 2 drum 125" with 8 slitters.
1—Langston 62" 21 shear cut slitters. Rewinds to 42".

STUFF PUMPS
1—Shartle 8½x12 Triplex—Silent Chain Drive.
1—Moore & White 7x12 Duplex.
1—Moore & White 7 x 12 duplex.

SUCTION COUCH ROLLS
1—Millspaugh 22" diameter x 138⅝" suction face.
1—Millspaugh 22" diameter x 138" drilled face.
1—Beloit 107" drilled face x 22" diameter. Anti friction bearings.
1—Millspaugh—14½" diameter x 93" drilled face.

SUCTION PRESS ROLLS
1—Downingtown 23" diameter x 180" drilled face.
1—Beloit 22" diameter x 180" drilled face for direct drive. Anti friction bearings.

SUPER CALENDERS
3—7 roll 62" face.
1—7 roll 65" face.
1—7 roll 56" face.

TRIMMERS
1—64" Seybold Precision with motor and five spare knives.

VACUUM PUMPS
1—H2 Nash for motor drive.

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1—Beloit 10' diameter x 132" face with stands, gears, bearings and drive.
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2—#420 Black & Clawson 10" x 16" Tripiex Geared Stock Pumps, bronze fitted, belt drive, 30" x 10" pulley.

2—Pusey & Jones Triplex Stock Pumps, 10" dia. cylinder, 20" stroke, 25 revolutions of crank shaft will throw 469 gallons. Pumps driven on jack shaft arrangement, gear and pinion drive.

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2—Jones standard Jordan—plain bearing—motor drive
1—Jones Majestic Jordan—plain bearing—motor drive
2—Noble and Wood Baby Jordans, anti-friction—motor drive
1—Noble and Wood Pony Jordan, plain bearing—motor drive
4—Noble and Wood Monarch, type "C", plain bearing—motor drive
5—Noble and Wood Mammoth Jordans, plain bearing—motor drive
1—Noble and Wood Monarch Jordan, plain bearing motor drive.

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1—Horne wooden tub beater, 52 x 48 roll, 1200 lb., bed-plate, with 60 HP motor, starter.
1—Noble and Wood 5 lb. laboratory beater, ball-bearing, bronze bars in roll, CI tub, with special agitator sampler attachment.

CALENDER ROLLS—4—10" x 141" calender rolls.
6—10½" x 124" calender rolls, four bored for steam. Newly ground.
1—16" x 124" calender roll, newly ground.
7 rolls for 116" calender stack, bottom roll, 22" diam. All rolls newly ground.
4 rolls for 90" calender stack, two rolls 14" diam., one 10", one 8".
1—108" 9 roll calender stack, Beloit.

CUTTERS—1—Beloit Duplex Cutter, 112" knives, ball bearing. Quick-change dual slitters, 25 Reeves drives on each knife. Practically new.
1—Hamblet 84" single knife, Erie Layboy, full set of slitters, motor drive 440/60/3, counter, 25 roll back-stand. Like new.
1—Black-Clawson 107" Triplex Cutter. Can be used as duplex by removing one knife. Variable speed drive. Quick change dual slitter attachment.
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DRYERS—33—Moore and White, 48" x 120" dryers. Balanced. Rope sheaves, bearings, packing glands.
4—Dryers, 48" x 116", with frames, gears, bearings.
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2—36 x 113" dryers.
2—36 x 114" dryers.
1—36 x 66" dryer.

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GEARS—70—Dryer gears for 36" dryers, 108 T, 1¼" P, 7⅝" B, 3½" F.
2—Dryer gears for 48" dryers, 113 T, 1½" P, 7"B, 4" F.

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2—Bauer Refiners, Used 6 months. 150 HP motors, Starting Equipment.
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1—Langston 121" two drum. Fitted for both shear cut and score cut slitters. 80" diameter rolls. Drive. Full set slitters.
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SUCTION ROLLS—1—Sandusky Suction Couch, 25" diameter x 137" drilled face, with stands and gear, complete.
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This consists of the following:

Unwind stand: one set of press rolls with pan, bottom rubber covered, top gun metal. 16 x 84".

First section of five dryers 36 x 82" with bottom felt and Lodding doctors and spring roll.

Size press, rolls rubber covered and gun metal 16 x 84".

Second dryer section consisting of 18 dryers 36 x 82", with bottom felt, Lodding doctors and spring roll and frames for top felt.

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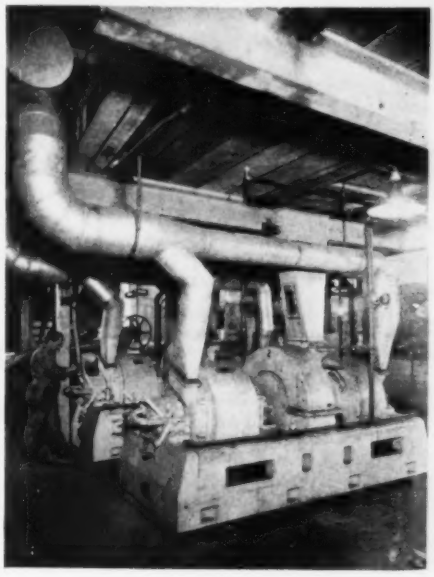

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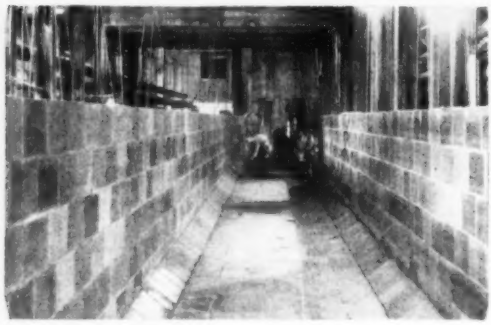

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Monsanto Chemical Company
Nopco Chemical Co.
Philadelphia Quartz Co.
Pittsburgh Plate Glass Co.
Solvay Sales Corp.
Wyandotte Chemicals Corp., J. B. Ford Division

CLUTCHES

Appleton Machine Co.
Black-Clawson Company
Farrel-Birmingham Co.
Hardinge Company, Inc.
Hudson Sharp Machine Co.
Rodney Hunt Machine Co.
Link Belt Company
Moore & White Co.
D. J. Murray Mfg. Co.
The Sandy Hill Iron & Brass Works

COATING MACHINERY

Frank H. Davis Co.
Dilts Machine Works
Frank W. Egan & Co.
Gibbs-Brower Company, Inc.
Hudson Sharp Machine Co.
The Mayer Machine Co., Inc.
Moore & White Co.
Potdevin Machine Co.
Shartle Brothers Machine Co.
Waldron Corporation, John
Weber, Herman G., & Co., Inc.

COATING MATERIALS

American Anode Div., The B. F. Goodrich Chem. Co.
E. I. Du Pont De Nemours & Co., Inc.,
The Goodyear Tire & Rubber Company
Hercules Powder Co.
Monsanto Chemical Company
Nopco Chemical Co

COGS

The N. P. Bowsher Co.

COMPOUNDED LATICES

American Anode Div., The B. F. Goodrich Chem. Co.

COMPRESSORS

Allis-Chalmers Mfg. Co.
Nash Engineering Co.

CONDENSATE FILTERS

Hungerford & Terry, Inc.

CONSISTENCY REGULATORS

Askania Regulator Company
Bird Machine Company
DeZurik Shower Company
Paper & Industrial Appliances

CONSULTING ENGINEERS

Birk, F. Paul
Ebasco Services
Frank W. Egan & Co.
Ferguson, Hardy S.
C. M. Guest & Sons
Alvin H. Johnson & Co., Inc.
Main, Inc., Chas. T.
Roderick O'Donoghue
The Rust Engrg. Co.
J. E. Sirrine & Co.
John Waldron Corp.
H. G. Weber & Co., Inc.
Frederick Wierk

CONTROLLERS

Askania Regulator Company
Black-Clawson Co.
The Bristol Co.
The Brown Instrument Co.
Cochrane Corp.

CONTROLS

Askania Regulator Company
The Bristol Company
The Brown Instrument Co.
Cochrane Corp.
Johnson Corp.
Midwest-Fulton Machine Co.
Stickle Steam Specialties Co.

CONVEYORS

American Well Works
Black-Clawson Company
Chain Belt Company
Frederick Iron & Steel, Inc.
Industrial Brownhoist Corp.
Link Belt Company
Murray, D. J., Mfg. Co.
Ross Engineering Corp., J. O.
Shartle Brothers Mch. Co.

CORE CUTTERS

Suburban Machine Co.

CORES

Elixman Paper Co.
Hubbard Spool Co.
Rodney Hunt Machine Co.
Smith & Winchester Mfg. Co.
Sonoco Products Co.
Walker-Goulard-Plehn Co.

COUPLINGS

Black-Clawson Company
Farrel-Birmingham Co., Inc.
E. D. Jones & Sons Co.
Koppers Company, Inc.
Link Belt Company
Moore & White Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
Valley Iron Works
Waldron Corp., John

CRANES

Cleveland Crane & Engrg. Co.
Industrial Brownhoist Corp.
Link Belt Company
Whiting Corp.

CUP AND CONTAINER MACHINES

Mercury Engrg. Corp.

CUTTERS

Dilts Machine Works
Gibbs-Brower Company, Inc.
Thomas W. Hall Co.
Moore & White Co.
Perkins & Son, Inc., B. F.
The Smith & Winchester Mfg Co.
Taylor, Stiles & Co.

CYLINDERS
Askania Regulator Company
M. W. Jenkins Sons, Inc.
National Tube Co.

DAMPENERS
Perkins & Son, Inc., B. F.
Valley Iron Works Co.

DECKLE WEBBING
Williams-Gray Co.

DE-INKING
Dilts Machine Works
General Dyestuff Corp.
Kinsley Chemical Co.
Roderick O'Donoghue
Shartle Brothers Machine Co

DEINKING CHEMICALS
E. I. Du Pont De Nemours & Co., Inc.
General Dyestuff Corp.
Kinsley Chemical Co.
Midwest-Fulton Machine Co.
Monsanto Chemical Company
Philadelphia Quartz Co.

DE-MINERALIZING EQUIPMENT
Hungerford & Terry, Inc.

DENSOMETERS
W. & L. E. Gurley

DESIGN CONSTRUCTION
Ebasco Services

DETERGENTS
Calgon, Inc.
Cowles Chemical Co.
General Dyestuff Corp.
Monsanto Chemical Company
Nopco Chemical Co.
Philadelphia Quartz Co.
Rohm & Haas Co.
Wyandotte Chemicals Corp.

DEWAXING CHEMICALS
General Dyestuff Corp.
Nopco Chemical Co.

DIGESTERS
Babcock & Wilcox Co.
The Biggs Boiler Works Co.
Combustion Engrg. Co., Inc.
Foster Wheeler Corp.
Lukenweld
Pusey & Jones Corp.

DIRTEC
Bird Machine Co.

DISPERSING AGENTS
Calgon, Inc.
General Dyestuff Corp.
Monsanto Chemical Company
Nopco Chemical Co.
Rohm & Haas Co.

DOCTORS
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Black-Clawson Company
Downingtown Mfg. Co.
Lobdell Co.
Lodding Engineering Corp.
The Moore & White Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.

DOCTOR BLADES
Bird Machine Company
Black-Clawson Company
Lodding Engrg. Corp.
The Moore & White Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.

DRIERS
Black-Clawson Company
Downingtown Mfg. Co.
Gibbs-Brower Company, Inc.
Hardinge Company, Inc.
Lukenweld
The Moore & White Co.
Murray Mfg. Co., D. J.
J. J. Ross Company
Red-Ray Mfg. Co., Inc.
Ross Paper Marchy. Co.
The Sand Hill Iron & Brass Works
Shartle Brothers Machine Co.
Valley Iron Works Co.
The Youngstown Welding & Engrg. Co.

DRIVES
Allis-Chalmers Mfg. Co.
Appleton Machine Co.
Bird Machine Co.
Black-Clawson Company
Chain Belt Company
Davis, Frank H., Co.
Dilts Machine Works
Downingtown Mfg. Co.
Fairbanks, Morse & Co.
Farrel-Birmingham Co.
General Electric Company
Gibbs-Brower Company, Inc.
Rodney Hunt Machine Co.
Link Belt Company
Moore & White Co.
Murray, D. J., Mfg. Co.
Pusey & Jones Corp.
J. J. Ross Company
Ross Paper Machy. Corp.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co
Syco Mfg. Co.
Valley Iron Works Co.
Westinghouse Electric Corp.

DRYER DRAINAGE
Midwest-Fulton Machine Co.
Stickle Steam Specialties Co

DUSTERS
Appleton Machine Co.
Downingtown Mfg. Co.
Frank W. Egan & Co.
M. W. Jenkins Sons, Inc.
E. D. Jones & Son Co.
Moore & White Co.
D. J. Murray Mfg. Co.
John Waldron Corp.

DUSTING BRUSHES
M. W. Jenkins Sons, Inc.

DYESTUFFS
American Cyanamid Company, Calco Chemical Div.
Ciba Company
E. I. du Pont de Nemours & Co., Inc.
Jeigy Co., The
General Dyestuffs Corp.
National Aniline Division, Allied Chemical & Dye Corp.
C. K. Williams & Co.
Witco Chemical Co.

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Frank W. Egan & Co.
Gibbs-Brower Company, Inc.
The Midvale Company
Northern Engraving & Mch. Co.
B. F. Perkins & Son, Inc.
John Waldron Corp.

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Nopco Chemical Co.
Rohm & Haas Co.
Wyandotte Chemicals Corp.

ENZYMES
Rohm & Haas Co.

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Foster Wheeler Corp.
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Murray, D. J., Mfg. Co.
Swenson Evaporator Co., Div of Whiting Corp.

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FANS
General Electric Co.
B. F. Perkins & Son, Inc.
Ross Engineering Co., J. O

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Merrick Scale Mfg. Co.
Leeds & Northrup

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Asten-Hill Mfg. Co.
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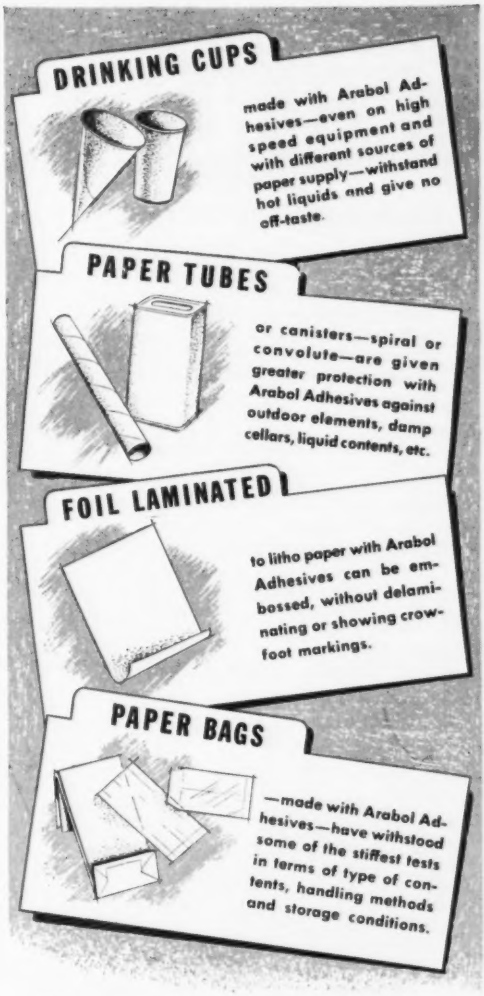
Draper Bros. Corp.
Huyck & Son, F. C.
Lockport Felt Co.
Mt. Vernon-Woodbury Mills, Inc.
Morey Paper Mill Supply Co
Orr Felt & Blanket Co.
Shuler & Benninghofen
Waterbury Felt Co.
Waterbury, H., & Sons Co.
Williams-Gray Co.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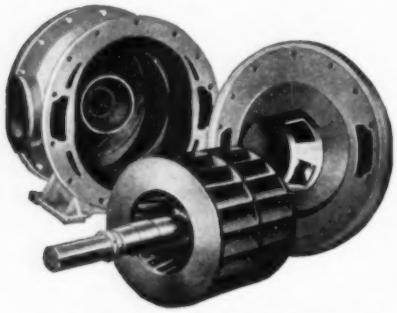

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Moore & White Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co
Waldron Corp., John

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A. M. Meincke & Son, Inc.
Vanderbilt Co., R. T.
Witco Chemical Co.

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Hardinge Company, Inc
Hungerford & Terry, Inc.
Johnson Corp.
Moore & White Co.
J. O. Ross Engrg. Corp
Witco Chemical Co.
Walworth Company

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Phoenix Products Co.
Walworth Company

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Norton Co.

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FORK LIFT TRUCKS
Towmotor Corp.

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Noble & Wood Machine Co
Oliver United Filters, Inc
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co

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De Laval Steam Turbine Co.
Downingtown Mfg. Co.
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Farrel-Birmingham Co.
E. D. Jones & Sons Co
Link Belt Company
Moore & White Co.
D. J. Murray Mfg. Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co
Smith & Winchester Mfg. Co
Suburban Machine Co.
Valley Iron Works Co.
Westinghouse Electric Corp

GRINDERS
Cartmage Machine Co.
Farrel-Birmingham Co.
Gibbs-Brower Company, Inc
Lobdell Co.
Norton Company
Samuel C. Rogers and Company
The Sandy Hill Iron & Brass Works

GRINDING WHEELS
Norton Company

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Askania Regulator Company
The Moore & White Co.
Mount Hope Machinery Co.
Round Brook Engrg. Co.
John Waldron Corp.

GUMMING MACHINES
Dilts Machine Works.

GUMS
National Starch Products Inc.
Stein-Hall Co., Inc.

HEADS
Babcock & Wilcox Co.
Lukens Steel Company

HEAT EXCHANGERS AND RECOVERY SYSTEMS
William Allen Son's Company
Davis Engrg. Corp.
Foster Wheeler Corp.
Midwest-Fulton Machine Co.
Stickle Steam Specialties Co.
Westinghouse Electric Corp.

HEATING, VENTILATING & AIR CONDITIONING
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Armstrong Machine Works
Cochrane Corp.
Davis Engrg. Corp.
E. D. Jones & Sons Co.
General Electric Co.
Leeds & Northrup
Minneapolis-Honeywell Regulator Co.
D. J. Murray Mfg. Co.
Red-Ray Mfg. Co., Inc.
Ross Engineering Corp., J. O.
Stickle Steam Specialties Co.
Valley Iron Works Co.
Westinghouse Electric Corp.

HOSE (Air, Water, Suction, etc.
The Goodyear Tire & Rubber Company

IMPREGNANTS
American Anode Div., The B F. Goodrich Chem. Co.

INDENTING MACHINES
Dilts Machine Works.

INDUSTRIAL TRACTORS
Clark Equipt. Co., Clark Tractor Div.
Towmotor Corp.

INK GRAVURE
Gotham Ink & Color Co.

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The Bristol Company
The Brown Instrument Co.
E. J. Cady Company
Cochrane Corp.
The Foxboro Company
General Electric Company
W. & L. E. Gurley
Leeds & Northrup Company
National Technical Laboratories
B. F. Perkins & Son
Photovolt Corp.
Taylor Instrument Cos.
Testing Machines, Inc.
Williams Apparatus Co., Inc.

JOINTS
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Perfecting Service Corp.

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Bahr Brothers Mfg. Co.
E. D. Jones & Sons Co.
Shartle Brothers Machine Co.
Smith & Winchester Mfg. Co.
Valley Iron Works Co.

KNIVES
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Dilts Machine Works, Inc.
Hamblet Machine Co.
Heppenstall Company
E. D. Jones & Sons Co.
The Moore & White Co.
Taylor Stiles & Co.
Valley Iron Works Co.

KNOT BORING MACHINES
DeZurik Shower Company

LABORATORIES
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LABORATORY EQUIPMENT
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Bauer Brothers Co.
The Bigga Boiler Works Co.
Bird Machine Company
Dilts Machine Works
W. & L. E. Gurley
E. D. Jones & Sons Co.
Leeds & Northrup Company
National Technical Laboratories

Taylor Instrument Companies
Testing Machines, Inc.
Valley Iron Works Co.

LAMINATING MACHINES
Dilts Machine Works.

LAY BOYS
Dilts Machine Works
Gibbs-Brower Company, Inc.
Hamblet Machine Co.
Moore & White Co.
Suburban Machine Co.

LUBRICANTS
Sinclair Refining Co.
Socony-Vacuum Oil Co.
Sun Oil Company
The Texas Company
Tide Water Associated Oil Co.

MAGAZINE REELS
Dilts Machine Works (Kohler System).

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Frank G. Hough Co.
The Wellman Engrg. Co.

MICROMETERS & CALIPERS
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Farrel-Birmingham Co.
Montague Machine Co.
Lobdell Co.
Testing Machines, Inc.
Walker-Goulard-Plehn Co.

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Askania Regulator Company
Midwest-Fulton Machine Co.
Stickle Steam Specialties Co.

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Chicago Electric Company
Fairbanks, Morse & Co.
General Electric Company
Ingersoll-Rand Co.
Reliance Electric & Engrg. Co.

NICKEL AND NICKEL ALLOYS
The International Nickel Co.

NOZZLES
Link Belt Company

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The Moore & White Co.
Perfecting Service Corp.
Shartle Brothers Machine Co.

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Black-Clawson Company
Downingtown Mfg. Co.
Gibbs-Brower Company, Inc.
Thomas W. Hall Co.
Lukenweld
Moore & White Co.
Pusey & Jones Corp.
J. J. Ross Company
Ross Paper Machy. Corp.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
Smith & Winchester Mfg. Co.

PAPER MACHINE SLICES
Black-Clawson Company
E. D. Jones & Sons Co.
The Moore & White Co.
The Sandy Hill Iron & Brass Works
Valley Iron Works Co.

PAPER TUBE MACHINERY
Dietz Machine Works
Gibbs-Brower Company, Inc.
Thomas W. Hall Co.
Hudson Sharp Machine Co.
Langston Co., Samuel M.
Suburban Machine Co.

PASTING MACHINES
Black-Clawson Company
Davis, Frank H. Co.
Dilts Machine Wks.
Frank W. Egan & Co.
Gibbs-Brower Company, Inc.
Murray, D. J., Mfg. Co.
Moore & White Co.
Potdevin Machine Co.
Shartle Brothers Machine Co.
Waldron Corp., John

PENSTOCKS
The Bigge Boiler Works Co.

PERFORATED METAL
Allis-Chalmers Mfg. Co.

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American Cast Iron Pipe Co.
Armco Drainage & Metal Products, Inc.
Babcock & Wilcox Co.
Crane Company
Michigan Pipe Co.
Michigan Steel Casting Co.
National Tube Co.
Walworth Company
Youngstown Welding & Engrg. Co.

PIPE FITTINGS
American Cast Iron Pipe Co.
The American Rolling Mill Co.
Crane Company
Ladish Company
Michigan Steel Casting Co.
Phoenix Products Co.
Walworth Co.

PIPE MARKERS
W. H. Brady Co.

PITCH CONTROL
General Dyestuff Corp.
Monsanto Chemical Company
Rohm & Haas Co.

PLATERS
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Perkins & Son, Inc., B. F.

PLATES
Armco Steel Corp.
Babcock & Wilcox Co.
The Bigge Boiler Works Co.
J. O. Ross Engrg. Corp.
Lukenweld
Lukens Steel Company
Timken Roller Bearing Co.

PLUGS
The Appleton Machine Co.
Black-Clawson Company
E. D. Jones & Sons Co.
Shartle Brothers Machine Co.

PRECIPITATORS
Koppers Co., Inc.

PRECISION SAMPLE CUTTER
Testing Machines, Inc.

PRESERVATIVES
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General Dyestuff Corp.

PRESSURE VESSELS, STEEL AND ALLOY
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Babcock & Wilcox Co.
The Bigge Boiler Works Co.
Combustion Engrg. Co., Inc.
Foster Wheeler Corp.
The Midvale Company

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Black-Clawson Company
Dietz Machine Works
Farrel-Birmingham Co.
Gibbs-Brower Company, Inc.
Thomas W. Hall Co.
Hudson-Sharp Machine Co.
The Moore & White Co.
Paper Converting Machine Co., Inc.
Potdevin Machine Co.
Shartle Brothers Machine Co.
Valley Iron Works Co.
Waldron Corp., John
H. G. Weber & Co., Inc.
Williams Apparatus Co.

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The Bauer Bros. Co.

PULP STOCK VALVES
Crane Company
Record Fdy. & Mach. Co.
Shartle Bros. Mach. Co.

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American Paper Mchy. & Engrg. Works, Inc.
Bauer Brothers Co.
Dilts Machine Works
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Midwest-Fulton Machine Co.
Shartle Brothers Machine Co.

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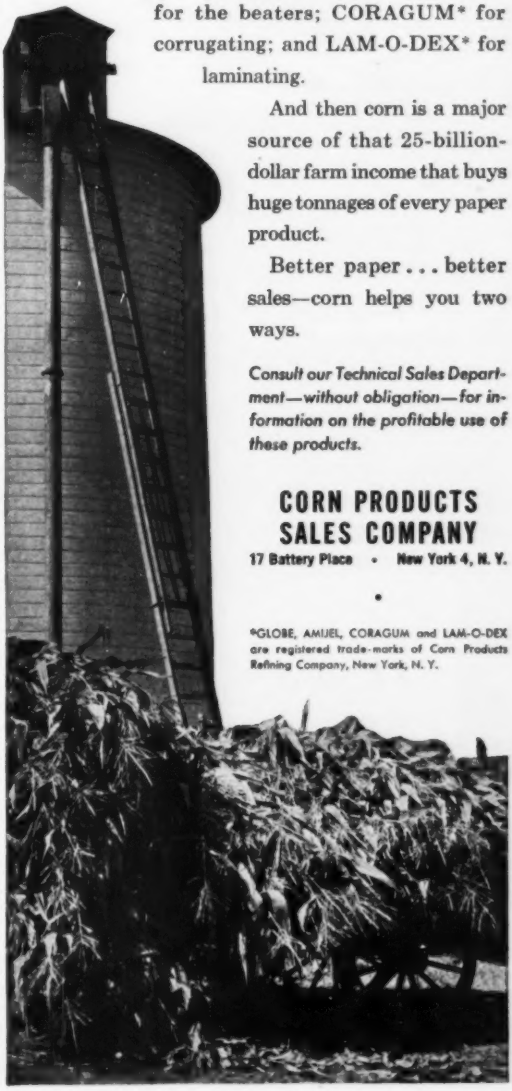

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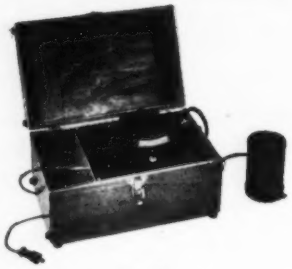

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Buffalo Pumps, Inc.
Byron Jackson Co.
DeLaval Steam Turbine Co.
Dorr Company
Downingtown Mfg. Co.
Fairbanks, Morse & Co.
Frederick Iron & Steel, Inc.
Gibbs-Brower Company, Inc.
Ingersoll-Rand Co.
Johnson Corp.
Moore & White Co.
Nash Engineering Co.
Paper Converting Mch. Co.
J. J. Ross Company
Ross Paper Machy. Corp.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
Smith & Winchester Mfg. Co.
Warren Steam Pump Company

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Rohm & Haas Co.

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Moore & White Co.
D. J. Murray Mfg. Co.
Pusey & Jones Corp.
Ross Engineering Corp., J. O.
Valley Iron Works Co.

REELS

The Appleton Machine Co.
Black-Clawson Company
Dilts Machine Works (Kohler System)
Downingtown Mfg. Co.
Hudson Sharp Machine Co.
Moore & White Co.
Paper Converting Mch. Co.
Rodney Hunt Machine Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
The Smith & Wincheater Mfg Co.

REFINERS

Appleton Machine Co.
Bahr Brothers Mfg. Co.
Bauer Brothers Co.
Dilts Machine Works
Gibbs-Brower Company, Inc.
E. D. Jones & Sons Co.
Midwest-Fulton Machine Co.
Morden Machines Co.
Murray, D. J., Mfg. Co.
Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
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ADVERTISERS

IN THIS ISSUE

A

Allis-Chalmers Mfg. Co. 3
American Cast Iron Pipe Co. . 45
Appleton Wire Works, Inc. 50
Appleton Woolen Mills 65

B

Bahr Bros. Mfg. Co. 66
Bauer Bros. Co. 67
Bird Machine Co. 11
Black-Clawson Co. 61
Blaw-Knox Co. 59
Bowsher Co., N. P. 66
Bristol Co. 4
Buffalo Forge Co. 33

C

Cameron Machine Co. 15
Chain Belt Co. 47
Classified Advertising 60
Clinton Industries 68
Corn Products Sales Co. 71
Cowles Chemical Co. 70

D

Davis, Frank H., Co. 65
Dilts Machine Works 61
Dow Chemical Co. 34
Downingtown Mfg. Co. 2
Draper Brothers 56

F

Fafnir Bearing Co. 29
Ferguson Co., H. K. 49
Ferguson, Hardy S., & Co. ... 66
Foxboro Co. 27

G

General Electric Co. .....8 & 9
Gottesman & Co. .....Front Cover

H

Hall, Thomas W., Co. 63
Hardinge Co., Inc. 52
Hough Co., Frank G. 17
Huyck & Sons, F. C. 75

J

Jones & Sons Co., E. D. 54

K

Kalamazoo Tank & Silo Co. 68
Kinsley Chemical Co. 66
Knox Woolen Co. 66
Koppers Co., Inc. 31

L

Langston, Samuel M., Co. 66
Lockport Felt Co. 13
Lukens Steel Co., Lukenweld Div. 51

M

Main, Charles T., Inc. 66
McBride Co., Inc., Edw. J. 57
Merrick Scale Co. 66
Michigan Steel Casting Co. 66
Moore & White Co. 19

N

Nash Engineering Co. 70
National Adhesives 25
Niagara Alkali Co. 21

O

O'Donoghue, Roderick 66

P

Paper & Ind. Appliances 59
Permutit Co., The 73
Photovolt Corp. 72
Powell Co., Wm. 23
Price & Pierce, Ltd. 72

R

Raymond, C. P., Service 60
Ross, J. J., Co. 62
Ross Paper Mchy. Co. 63
Rust Engineering Co. 66

S

Shartle Brothers Machine Co. . 61
Sindar Corp. 28
Sirrine Co., J. E. 66
Smith & Winchester Mfg. Co. . 58
Socony Vacuum Oil Co. Back Cover
Stanley Works, The 55
Sun Oil Co. 6

W

Walworth Co. 53
West Virginia Pulp & Paper Co. 57

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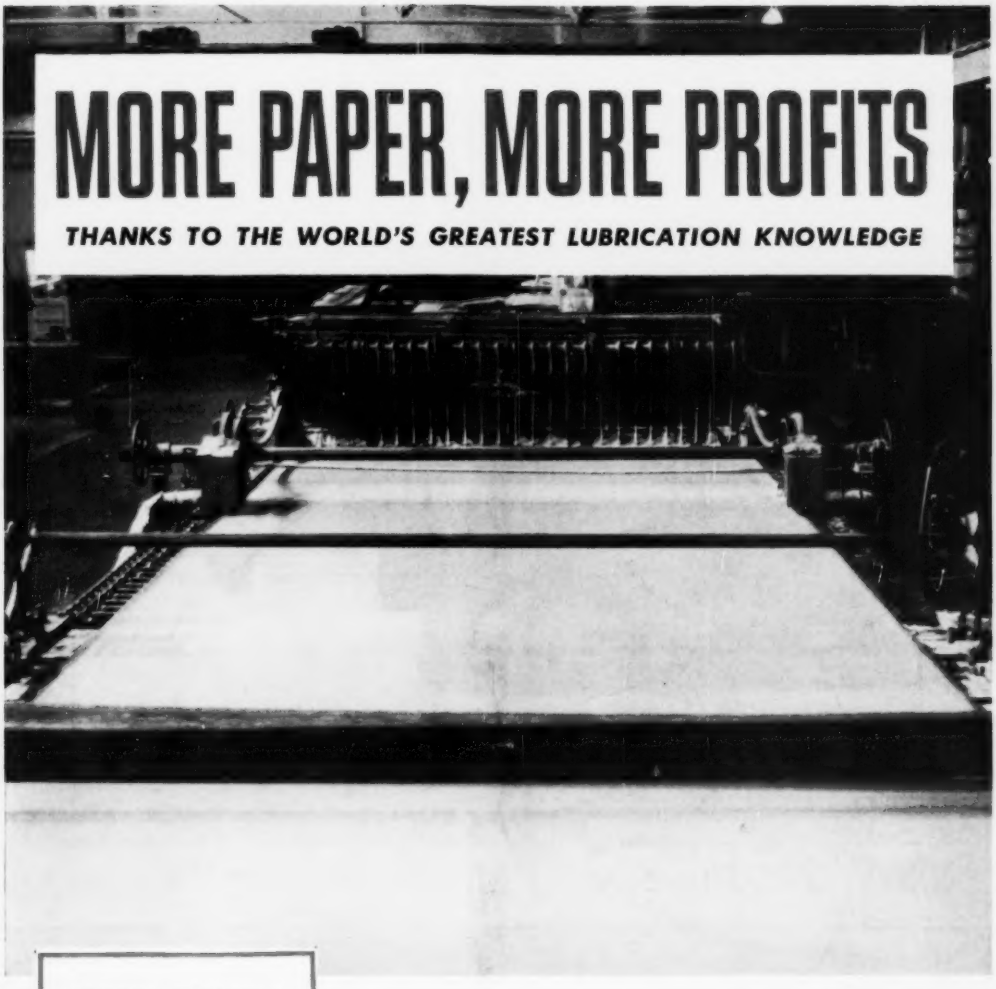

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